DOCUMENT RESUME

ED 417 880 RC 021 434

AUTHOR	Montgomery, Diane, Ed.
TITLE	Coming Together: Preparing for Rural Special Education in the 21st Century. Conference Proceedings of the American Council on Rural Special Education (18th, Charleston, South Carolina, March 25-28, 1998).
INSTITUTION	American Council on Rural Special Education.
PUB DATE	1998-03-00
NOTE	411p.; For selected individual papers, see RC 021 435-472.
PUB TYPE	Collected Works - Proceedings (021)
EDRS PRICE	MF01/PC17 Plus Postage.
DESCRIPTORS	Computer Assisted Instruction; *Disabilities; Distance Education; Early Childhood Education; Educational Cooperation; Educational Practices; *Educational Strategies; Elementary Secondary Education; Higher Education; Mainstreaming; Minority Groups; Parent Participation; Professional Development; Regular and Special Education Relationship; *Rural Education; Rural Schools; *Special Education; Special Education Teachers; *Teacher Collaboration; *Teacher Education; Transitional Programs

ABSTRACT

This proceedings contains 64 papers on rural special education. Papers present promising practices in rural special education, discussions of theory and research, research findings, program descriptions, and topics of current concern. The papers are organized in order of presentation, and are categorized in a topical index under the following subjects: at-risk students, collaborative education, deaf education, early childhood, leadership and policy issues, multicultural concerns (including Native American programs), parents and families, professional development (preservice and inservice), professional publication, technology, and transition. (SV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 417 880

American Council on Rural Special Education

1998 Conference Proceedings

Coming Together:
Preparing for Rural Special Education in the 21st Century

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Diane Montgomery

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

March 25-28, 1998
Charleston, South Carolina

Edited by Diane Montgomery, Ph.D.
Oklahoma State University
ACRES Program Chair

RC 021434

TABLE OF CONTENTS

Introduction vii

WEDNESDAY EVENING OPENING PANEL DISCUSSION

PANEL: Developing Interactive Multimedia Modules to Train Rural Special Education Personnel
Barbara L. Ludlow, West Virginia University, Morgantown, West Virginia
John D. Foshay, West Virginia University, Morgantown, West Virginia
Michael C. Duff, West Virginia University, Morgantown, West Virginia 1

THURSDAY CONCURRENT SESSIONS I

Beyond Bells and Whistles: Using Interactive Multimedia for Preservice and Inservice Education
Linda P. Thurston, Betsy Cauble, and Janice Kinkel, Kansas State University, Manhattan, Kansas 9

Pinon Preparation Program (PPP): Meeting the Needs of Rural Native American Students Through Site-based Education Programs
Greg Prater, Jamie B. Lewis, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 15

Unlocking Children's Language Development
J. Lindsey Stafford, Lawton Public Schools, Lawton, Oklahoma 21

A Collaborative Program to Prepare Mainstream Teachers: Using Peer Supervision by General and Special Educators
Barbara L. Ludlow, Wilfred D. Wienke, Joan Henderson, and Holly Klein, West Virginia University, Morgantown, West Virginia 26

THURSDAY CONCURRENT SESSIONS II

Instructional Design in Computer Mediated Learning
Kay Sather Bull, Sarah Leigh Kimball, and Susan Stansberry, Oklahoma State University, Stillwater, Oklahoma 34

The Rural Special Education Project: A Six-Year Evaluation
Susan Miller, Catherine Medina, Doris Jones, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 42

Coming Together Through Comprehensive Professional Development -- Key To Statewide Improvement Plans
Harvey Rude, Karl Murray, and Judy Stockhouse, National Association of State Directors of Special Education (NASDSE), Alexandria, Virginia 46

Teacher Education Partnerships at Valley High School
Harvey Rude, University of Northern Colorado, Greeley, Colorado 54

Project BESTT: A Training Model for Rural, Multicultural Bilingual
Laurence Armand French and Richard Francis Rodriguez, Western New Mexico University, Silver City, New Mexico 62

THURSDAY CONCURRENT SESSIONS III

Techniques for Developing a Syllabus/Website for a Computer Mediated Learning (CML) Course
Kay Sather Bull, Sarah Leigh Kimball, and Susan Stansberry, Oklahoma State University, Stillwater, Oklahoma 69

Serve To Learn: Making Connections in Rural Communities
Mary T. Davis, Maggie Emery, and Cheryl Lane, Clemson University, Clemson, South Carolina 77

Staying, Leaving, and Job Satisfaction in a Rural/Remote State: A Matter of Roots
John Hoover and Belle Aakhus, University of North Dakota, Grand Forks, North Dakota 84

Promoting Greater Reflectivity in Rural In Service Practicum Experiences
Steve Pavlovic, Billie Friedland, and Sara Brannon, West Virginia University, Morgantown, West Virginia 98

Prenatal Drug Exposure in the Heartland: Rural Daycare to the Defense
Lloyd Kinnison, Texas Women's University, Denton, Texas; and Dennis L. Cates, Cameron University, Lawton, Oklahoma 91

THURSDAY CONCURRENT SESSIONS IV

***PANEL:** The Good and the Bad in Distance Education*
Gary Adamson, University of New Mexico, Albuquerque, New Mexico 103

The Pen is Mightier than the Sword: How to Get Published in the Rural Special Education Quarterly
Jack T. Cole, R. Fletcher, Robert Gerke, Catherine Medina, New Mexico State University, Las Cruces, New Mexico (reprinted from the 1995 ACRES Conference Proceedings, p. 412-415) 106

Anticipating Future Teacher Shortages: A Review of One Alternative Approach for Rural Districts
Michael E. Sullivan, Marshall University Graduate College, South Charleston, West Virginia 110

Educating Students with PDD/Autism: The Case for Rational Inclusion
Frank C. Renew, RENEW ASSOCIATES, Penacook, New Hampshire 118

***PANEL:** Perspectives on Adapted Physical Education Services to Rural Populations*
Joe Nolan, Texas A & M-Corpus Christi, Corpus Christi, Texas
Peter Ellery, University of south Florida, Tampa, Florida
Paul Maguire, University of Alaska-Anchorage, Anchorage, Alaska 125

Language Development Through Story Retelling Documented By Six Trait Writing Analysis
Nancy Montgomery, University of Kansas Medical Center, Kansas City, Kansas; and Cindy Griffiths, Olathe District School, Olathe, Kansas 132

FRIDAY CONCURRENT SESSION V

A Horse of a Different Color: Distance Education: Making It Effective
Jo Jakupcak, University of Montana, Missoula, Montana; and Mary Susan Fishbaugh, Montana State University-Billings, Billings, Montana 139

Teaching Navajo Bilingual Special Education Students: Challenges and Strategies
Jamie B. Lewis, Kathleen Bennett deMarrais, Greg Prater, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 148

The New IDEA: What is the Impact on Federal Funding of Rural Personnel Preparation
Wilfred D. Wienke and Suzanne Martin, West Virginia University, Morgantown, West Virginia; Jane M. Williams, Arizona State University West; and Robert Gilmore, Office of Special Education Programs, Washington, DC 156

Teaching a Basic Teaching Strategy; Methods and Procedures
Fay Balch Jackson, Wayne State College, Wayne, Nebraska; and Marion Madison, University of West Alabama, Livingston, Alabama 161

Practicing What We Preach: Collaborating Across and Through College Methods Courses
Laura A. Reissner, Northern Michigan University, Marquette, Mighigan 169

FRIDAY CONCURRENT SESSIONS VI

Teams, Networks, and Assistive Technology: Training Special Educators in Rural Areas
Cheryl Henderson and Maggie Kyger, James Madison University, Harrisonburg, Virginia; and Dana Guarino-Murphey, Lynchburg College, Lynchburg, Virginia 173

Traditional Versus Contemporary Navajo Views of Special Education
Catherine Medina, Doris Jones, Susan Miller, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 179

The Entrepreneurial Curriculum: Rural School-Community Process for Vocational Training of Adolescents with Disabilities
Veronica Gold and Ellen Williams, Bowling Green University, Bowling Green, Ohio 186

Parents as Partners in Education
Lanny Hubbard, Tracy Weiskircher, Lea Wooldridge, Lincoln County Board of Education, Stanford, Kentucky 194

Preparing General Educators to Serve Students with Learning Disabilities: Rural Classroom Applications
Wilfred D. Wienke, West Virginia University, Morgantown, West Virginia; and Kevin Miller, St. Bonaventure University, St. Bonaventure, New York 199

It Takes Two: Co-Teaching for Deaf and Hard of Hearing Students in Rural Schools
Mary V. Compton, Angie Stratton, Ali Maier, Charice Meyers, Holly Scott, and Tammy Tomlinson, University of North Carolina at Greensboro, Greensboro, North Carolina 204

Developing Interaction in Computer Mediated Learning
Kay Sather Bull, Sarah Leigh Kimball, and Susan Stansberry, Oklahoma State University, Stillwater, Oklahoma ... 210

FRIDAY CONCURRENT SESSIONS VII

Rural Ojibwe Mothers' Experiences with Early Childhood Special Education Services
Belle P. Aakhus and John H. Hoover, University of North Dakota, Grand Forks, North Dakota ... 218

Long Distance Education at the University of Kansas (Rural Deaf Education in the Midwest)
Barbara Luetke-Stahlman, University of Kansas, Kansas, Kansas ... 226

Parent Support Services on the Navajo Reservation
Doris Jones, Susan Miller, Catherine Medina, and the NAU Research Team, Northern Arizona University, Flagstaff ... 234

Keeping Qualified Special Educators Under the Big Sky
Mary Susan E. Fishbaugh and Linda Christensen, Montana State University-Billings, Billings, Montana ... 241

Including Rural Districts in Inclusive Staff Development
Loretta Pfluger and Jenny Hendricks, Region 16 Education Service Center, Amarillo, Texas ... 248

FRIDAY CONCURRENT SESSIONS VIII

Preparing Teachers to Work with Children and Youth with Emotional/Behavioral Disorders (E/BD) in Rural Settings Through the Use of Technology
Suzanne M. Martin and Wilfred Wienke, West Virginia University, Morgantown, West Virginia ... 254

Let's Talk About the Needs of African American Children with Sickle Cell Disease: A Recognized "Other Health Impairment"
Elizabeth A. Dooley and Nechelle Perkins, West Virginia University, Morgantown, West Virginia ... 258

Training Rural Teachers as Researchers: Guidelines for Conducting Field-Based Research in the Rural Classroom
Belva C. Collins, Jennifer Grisham-Brown, and John W. Schuster, University of Kentucky, Lexington, Kentucky ... 267

Cooperative Teaching and Cooperative Learning: The Key to Successful Collaboration in Rural Classrooms
Nancy Harriman, University of Southern Maine, Gorham, Maine; Mary Schmidt, East Caroline University, Greenville, North Carolina; and Sherry Estabrook, University of Southern Maine, Gorham, Maine ... 274

Revisiting ADHD Inservice Training for Rural Educators
Diane T. Woodrum, West Virginia University, Morgantown, West Virginia ... 280

Clarion University of PA and SMILES AmeriCorps: Collaborations with Basic Education
Bryan W. Huwar, Clarion University of Pennsylvania, Clarion, Pennsylvania ... 288

SATURDAY CONCURRENT SESSIONS IX

Long Distance Learning: A Collaborative Approach for a Speech Pathology Program
Margaret Cotter, Cooke County Special Education Coop, Gainesville, Texas 292

A Collaborative Computerized Language Training Project Between Gonzaga University and St. Luke's Rehabilitation Institute
Suzanne Harrison, Gonzaga University, Spokane, Washington 297

Administrative Concerns Toward Innovations (Inclusion)
H. H. (Buddy) Hooper, Jr., Turner Unified School District, Kansas City, Kansas; and Donald (Don) Fry, University of Houston-Victoria, Victoria, Texas 304

Including Students with Severe Disabilities in Rural Middle and High School: Perceptions of Classroom Teachers
Joan P. Sebastian and Connie Mathot-Buckner, University of Utah, Salt Lake City, Utah 308

Who's in Charge Here? Leadership in Rural Special Education
Robert L. Morgan, Indiana Wesleyan University, Marion, Indiana; James E. Whorton, University of southern Mississippi, Hattiesburg, Mississippi; and Patricia A. Cruzeiro, Chadron State College, Chadron, Nebraska 316

A Discussion of the Roles of Institutions of Higher Education in Meeting the Needs of School in Rural Areas
David J. Lasseter and Diane Lea Ryndak, University of Florida, Gainesville, Florida 322

Voices From Within
Keith Salyer, E. Joanne Necco, Joann McCarthy, University of Central Oklahoma, Edmond, Oklahoma; and Sherry D. Ward, Piedmont Middle School, Piedmont, Oklahoma 330

Standard Achievement Tests and Students with Special Needs
Dawn Burke, Wiley Ford Primary School, Wiley Ford, West Virginia; and Thomas P. Lombardi, West Virginia University, Morgantown, West Virginia 338

SATURDAY POSTER PRESENTATIONS

Families and Early Intervention Professionals in Rural Areas: Unique Challenges
Melanie B. Jephson, Kendra P. Russell, L. A. Youngblood, Stephen F. Austin State University, Nacogdoches, Texas 343

The Whole World: Just Down the Road
James E. Whorton, University of Southern Mississippi, Hattiesburg, Mississippi; Robert E. Fowler, University of Charleston, Charleston, South Carolina; and James A. Siders, University of Southern Mississippi, Hattiesburg, Mississippi 348

A Bee Sees Its New Home
John D. Foshay, West Virginia University, Morgantown, West Virginia 356

Labeling and Classification
Shu-Jen Chen, Oklahoma State University, Stillwater, Oklahoma 358

Project LISTOS: A Bilingual Special Education Program

Lawrence Ingalls, University of Texas at El Paso, El Paso, Texas 368

The Transition Planning (ITP) Process for Secondary Students with Severe Disabilities- A Pilot Focus Group Project Comparing Urban and Rural Populations
Joe Nolan, Texas A & M-Corpus Christi, Corpus Christi, Texas 370

Identification, Differeniation and Intervention of the Demographically Diverse Four Year Old: Strategies for Rural Education
Pauline J. Holloway, Oklahoma State University, Stillwater, Oklahoma; and Charlotte Myles-Nixon and Wanda M. Johnson, University of Central Oklahoma, Edmond, Oklahoma 373

SERTCC Intensive Family Based Services - A Supportive Alternative to Out Of Home Placement
William L. Young, Glynn County Board of Education, Brunswick, Georgia; and Flo W. Fordham, Cedarwood Psycho-educational Program, Statesboro, Georgia 378

Project TRAILS: Transition Responsible Actions for Independent Liveing Success
Denise Kaiser, Michael Abell, and Mary L. Comer, Ohio Valley Educational Cooperative, LaGrange, Kentucky 380

Biotechnology Works!
Libby G. Cohen, University of Southern Maine, Gorham, Maine; and Loraine J. Spenciner, University of Maine-Farmington, Farmington, Maine 383

A Personnel Preparation Project: It Takes More Than Money!
Helen Hammond, University of Texas at El Paso, El Paso, Texas 387

Special Education Administration Training for Rural Minority School Leaders: A Funded Proposal
Dianne Monteith, South Carolina State University, Orangeburg, South Carolina 390

INDEX BY TOPICAL STRAND 400

WELCOME TO THE 1998 CONFERENCE

OF THE

AMERICAN COUNCIL ON RURAL SPECIAL EDUCATION

Introduction

Welcome to Charleston, South Carolina and the 18th year for the members of the ***American Council on Rural Special Education*** to gather and share their experiences, skills and knowledge. Whether this is your first or fifteenth conference, be assured that you will discover something new that will assist you in improving the educational opportunities for rural children and youth with disabilities or giftedness.

The theme for the 1998 Conference is COMING TOGETHER: PREPARING FOR RURAL SPECIAL EDUCATION IN THE 21ST CENTURY. Presentations focus on the collaboration and teamwork needed in meeting the needs of rural children and youth with disabilities. The concept of "preparednesss" is reflected in innovative teacher preparation programs, preparation of administrators, and preparing learners for life in the 21st Century.

The ***Proceedings*** is a collection of 64 papers representing the wide array of presentations in promising practices, discussions of theory and research, research findings, or issues of concern in rural special education today. Papers are organized according to the order in which they will be presented at the conference. The *Proceedings* will serve as a convenient way to structure and plan your conference experience. At the end of the *Proceedings*, you will find an index of all papers organized by topic. The index will serve as a convenient way to locate the papers after the conference is over.

The topics used to organize the index correspond to the strands used to organize the conference. They are: At-Risk Students, Collaborative Education Models, Deaf Education and Serving Students with Hearing Loss, Early Childhood, Leadership and Policy Issues, Multicultural Concerns, Other Issues in Rural Special Education, Parents and Families, Professional Development - Preservice and Inservice, Professional Publication for ACRES, Technology, and Transition.

Our authors represent professionals from public and private schools; community, state and national agencies; colleges and universities, and private consulting agencies. We thank each of them for his or her contribution to rural special education.

Diane Montgomery,
ACRES Program Chairperson

Barbara L. Ludlow, Ed.D.
John D. Foshay
Michael C. Duff
Special Education Programs
West Virginia University
Morgantown, WV 26506

DEVELOPING INTERACTIVE MULTIMEDIA MODULES TO TRAIN RURAL SPECIAL EDUCATION PERSONNEL

Introduction

Educators have recognized the importance of multimedia instructional materials to portray the dimensions of the real world and accommodate the many learning styles exhibited by diverse learners. Multimedia materials have been recommended as one form of anchored instruction or situated learning to help learners relate theory to practice and form useful concepts of important principles. Computer-assisted multimedia is especially appropriate for the design of self-instructional modules, since the computer allows for learner interaction. Nevertheless, most existing materials have been developed in content areas rather than for professional training. To date, there have been relatively few applications of multimedia in teacher education in special education. Recent innovations in desktop software applications, however, have simplified the development and programming of original multimedia modules tailored by instructors for their own specific instructional uses. But, multimedia development requires expertise in instructional content/design, media production, and computer programming. At West Virginia University, a development team consisting of a faculty member with content expertise in supervision of special education practicum experiences, a doctoral student with a background in special education and instructional technology, and a video producer with experience in digital video media worked together to develop a series of self-instructional multimedia modules to prepare cooperating teachers and university supervisors for their roles in supervising practicum experiences in rural areas. Their account of the development process and the final product of their efforts may be useful in inducing faculty at other colleges and universities to consider developing multimedia applications that may be appropriate in their own rural personnel preparation programs in special education.

Rationale for Multimedia Instruction

In recent years, instructors at many colleges and universities have turned to the use of multimedia materials to portray for students the dimensions of the real world of the classroom (Goldman & Barron, 1990; Todd, 1993; Willis & Meblinger, 1996). Multimedia portrayals of classroom scenes and teaching episodes have been recommended as one form of anchored instruction or situated learning (Bransford, Sherwood, Hasselbring, Kinzer, & Williams, 1990; Brown, Collins & Druguid, 1989; CTG-VLTC, 1993; Lave & Wenger, 1991). The recent revolution in media production via desktop computers has made the creation of original materials integrated into mulimedia applications tailored by the instructors for their own specific uses a reality (Howes & Pettengill, 1993; Richards, Chignell, & Lacy, 1990; Wagner, 1996). Multimedia hold promise for creating "virtual classrooms" which will enable learners to have access to many resources that previously were unavailable. Unfortunately, few instructors have acquired the knowledge or skills to plan and produce original media materials and they may not know how to learn more about this field. Yet, desktop production of media modules that include video, audio and graphics is neither difficult nor beyond the ability of most instructors. Designing, producing, and using original multimedia materials in instruction are skills that can easily be acquired with some basic instruction and reference to a few simple guidelines.

Computer-assisted instruction has been an important component of teacher education in special education for over a decade (Cartwright, 1984; Blackhurst & McArthur, 1986; Rieth et al., 1993). More recently, use of multimedia modules for instruction has been found to be especially effective in promoting development of new clinical knowledge and skills through creating structures for situated learning of current best practices (Bosworth & Welsh, 1992; Chen, 1993; Luna & McKenzie, 1997; Overbaugh, 1994), as well as appropriate for providing learners with opportunities for reflection, problem solving, and practical application with feedback (Goldman & Barron, 1990; Lave & Weger, 1991; Todd, 1993). Interactive modules using computer programs to control videodiscs have already been used to train teachers as behavior managers (Strang, Murphy, Kauffman, Badt, & Loper, 1986), early intervention personnel (Macy, Klapprodt, Hammer, & Macy, 1987), paraprofessionals (Salzberg, Rule, Chen, Fodor-Davis, Morgan, & Schulze, 1989); behavior disorders specialists (Fitzgerald, Wilson, & Semrau, 1996), and assistive technology providers (Thorkildsen & Lowry, 1997). The use of multimedia to demonstrate programs and practices is not only cost-effective, but even essential to developing the kind of knowledge and skills that special education personnel need to function well in their demanding and ever changing roles in providing high quality educational programming to students with special needs.

Multimedia development is no longer the exclusive domain of the wealthy or the technically sophisticated. The recent revolution in digital media and its incorporation into computer hardware and software applications for the desktop has made multimedia design and production accessible to the average user (Fidler, 1997). The availability of inexpensive computer software and hardware has made the creation of original video materials integrated into multimedia applications tailored by the instructors for their own specific uses a new outlet for course development and scholarly productivity (Azarmsa, 1996). Instructors who now use their computers via word processing and database programs primarily to design print or text-based materials, will soon find new uses for their desktop systems to create video materials for display in their classes via tape or disk formats. Although it is possible for a single person to do all the work for a multimedia project, it is more reasonable to assemble a team of people with different areas of expertise to collaborate in the design and production of multimedia materials to insure an appropriate balance of instructional effectiveness, production values, and aesthetic qualities (Alber, 1996; Maddux, 1994). New authoring software programs, which enable program designers to incorporate text, graphics, and video with ease, have made the creation of modules a real possibility for the average instructor who is willing to take the time and effort to learn some new skills and to collaborate with others ----.

Colleges and universities with teacher education programs in special education that prepare teachers and related service personnel to work in rural areas need to use instructional materials that depict program models, methods, and materials that have been successful in rural schools. The simplest and most straightforward use of multimedia materials is to provide students with illustrations of basic concepts, demonstrations of specific skills, or examples of model programs and practices, through presentation of either real world situations or simulations. These materials also can be used as contextually rich case studies to stimulate student discussion of issues and/or application of knowledge and skills. Such materials can be invaluable aids in helping preservice and inservice teachers to acquire important knowledge and skills for working in rural settings. Yet, most of the media and materials that are widely available represent program models from urban and suburban areas that may or may not be appropriate for or feasible in rural schools. This situation means that many faculty will see a need to create original multimedia materials that can be used in to deliver and support instruction in the context of rural teacher education programs. Faculty and staff at West Virginia University recognized a need for to a series of self-instructional modules to assist cooperating teachers and supervisors to acquire appropriate skills for conducting practicum experiences in special education at the undergraduate and undergraduate levels in rural skills. Consequently, they formed a team to develop and produce a multimedia project.

Developing Module Content and Activities

West Virginia University offers teacher education programs in special education at both the undergraduate and graduate levels that includes a range of practicum experiences including placement with a master teacher as well as peer supervision in the job setting. Recognizing the importance of practicum experiences for the development of teaching skills and the critical role of supervisory personnel (Buck, Morsink, Griffin, & Lenk, 1992), the program has made every effort to select qualified supervisors and prepare them for their roles. The size of the WVU service area across the state combined with the high attrition rates of special education personnel in rural areas has created a situation in which the program experiences constant turnover of supervisory personnel and a continuing need to train new cooperating teachers and university supervisors. Although the program has offered training sessions for new supervisors, time and travel constraints prevent many individuals from attending these sessions before they are called upon to supervise a practicum experience. The practicum coordinator recognized the potential of multimedia modules for use as a self-study training format that could be delivered to new supervisors on an individual, as needed basis.

The faculty instructor developed the content and instructional design for the multimedia modules from the existing practicum model in special education at West Virginia University, which is based on the philosophy and techniques of clinical supervision (Glickman, Gordon, & Ross-Gordon, 1997). The instructor reviewed the practicum handbook, the supervisor manual, and the supervisor training sessions handoutrs and activities to identify topics to be included in the modules. She organized this content into four component modules: overview of supervision; strategies for observation/documentation; strategies for fedback; and, strategies for evaluation. Using principles of effective instructional design (Dick & Carey, 1996), she outlined learner outcomes as well as learning activities for each component. Effective computer-based instruction uses a logical sequence to represent the particular knowledge structures (Hannum, 1988), and reflects a presentation -- demonstration -- practice -- feedback cycle (Criswell, 1989). Therefore, each module was designed to include three types of content: text presentations (such as definitions of key terms, explanations and examples of principles and practices); media presentations (such as video clips of supervision activities and audio clips of interviews with supervisors), and practice/assessment activities.

Another important step in creating original multimedia materials is preparing a script or flowchart to guide the development process (Korolenko, 1997; Sauer, 1997). The instructor developed a set of design specifications for each screen, which included three key features: a basic layout representing the approximate size and shape of the computer screen; conventions for displaying content, such as text, audio, video, and graphics; and, link notations, including the type of link as well as its appearance and location on the screen. Using these guidelines, she prepared by hand a series of graphic representations of all screens, printing and drawing the content and using different color inks for content features, directions to the programmer, and queries about the layout. Since each module had to be entirely contained within a single CDROM disk with a maximum storage capacity of 650 megabytes, the team worked together to determine storage requirements for different content types to estimate the amount of information that would fit. They identified several planning factors: text requires minimal space; a photo graphic requires 300 to 500 kilobytes of storage for black and white image and 700 to 1000 kilobytes for color image; a 20 second audio clip requires 70 to 100 kilobytes of storage; and a 30 second video clip at 15 frames per second compression rate requires some 20 to 25 megabytes of storage.

Preparing the Video and Audio Segments

Video and audio are effective instructional media when their unique capabilities are highlighted (Baggett, 1989; Cartwright, 1991; Kozma, 1991). The faculty instructor designed the video and audio segments for the multimedia modules based upon specific topics identified during content development. Video segments are most effectively used to demonstrate action sequences; therefore, the instructor determined that video segments should focus on supervison skills associated with each module component (e.g., in the feedback component, segments were planned to show effective and ineffective verbal exchanges). Audio segments are most effectively used to convey personal perspectives, so audio segments were planned to convey interviews with supervisors discussing critical aspects of supervision in their own words (e.g., in the feedback component, interviews offered comments on dealing with difficult situations and reasons why feeddback is an important component of effective supervision).

12

After the instructor determined the video scenes and interview clips that were needed to illustated the content in the modules, she arranged for experienced supervisory personnel to assist in the production of these segments. She scheduled the shoots at an appropriate location and time and distributed information to participants to help them prepare for their roles. All supervisors were asked to prepare 20 to 30 secon9d sound bites based on their personal experiences in response to a series of questions on key opportunities and challenges in supervision. The instructor worded these questions as open-ended statements such as "The hardest part of supervision is -----" or "I handle a difficult student by -----". The questions were worded slightly differently for each participant to insure that their comments would vary to some extent. Some supervisors also were asked to serve as actors in role play scenarios developed to depict situations typically encountered during supervision and to portray appropriate and inappropriate responses. The instructor provided role play participants with a description of the specific behaviors to be demonstrated in the 60 to 90 second scenario, but the actors developed their own context and interactions to keep a lively feel. The instructor briefly reviewed the interview responses and role play plans with the participants just prior to the videotape recording to insure that theese activities would meet the content requirements of the modules.

This project utilized Sony Betacam SP professional quality videotaping equipment to insure the highest quality images. The video producer was responsible for recording, editing, and digitizing these segments for the multimedia modules, in collaboration with the faculty instructor as content expert and the technology assistant as computer programmer. On the day of each shoot, the producer set up the camera in the selected location and arranged the setting to minimize irrelevant stimuli such as distracting backgrounds or external noises. He used a professional three-light kit to insure that the subjects were well-lit and that the foreground figures were separated from the background. He also used lavalier microphones clipped to the subjects' clothing to insure the highest fidelity speech sound and to limit interference from room noises (Tanaka, 1997). For all video and audio segments, he planned a sequence of shots following recommendations for video to be compressed and played back on desktop computers (Thibodeau, 1997). For the interviews, he used a tight shot of the supervisor from the side as she or he responded to the questions and prompts provided by the instructor (but the instructor did not appear on camera). For the role plays, he first used a wide shot of both actors performing the entire scenario; he then used a tight shot of each actor repeating the entire scenario. This technique allowed the finished segment to be composed of an edited sequence of closeups and wide shots for a more interesting display than the use of wide shots alone.

After all necessary footage was recorded for each module, the producer digitized the tape for editing and incorporation into the interactive formats, following compression guidelines for maximizing image quality while minimizing file sizes (Shaw, 1996; Volkow, 1997). He connected the Beta SP videotape recorder to a Macintosh 8600 computer with a built-in AV board to capture the video and audio segments. The segments were imported into Adobe Premiere for editing. Each segment was opened and closed with a freezeframe so that the opening shot could be displayed on the screen prior and subsequent to playing the entire segment. For the interview segments, he trimmed the audio clips so that the person's statement would begin and end clearly. For the role play segments, he laid down the wide shot version, then edited in the closup versions of each actor as needed to portray the main action. When the editing was finished, the producer made movies in Apple's Quicktime and put them in a bin for later use by the programmer in assembling the modules.

Using Desktop Computers for Multimedia Development and Production

Effective multimedia materials capitalize on the computer's capacity for interaction with the learner as well as the availability of software that simplifies programming chores (Moore, 1994; Myers & Burton, 1994). The technology assistant was responsible for programming all components of the multimedia modules. This project used an Apple Power Macintosh 8600 computer with AV configuration for development and production because of its reasonable cost and ease of use. This computer platform has a factory-installed video and audio input and output board as well as sufficient speed and memory to manipulate large files. Project staff used two types of external storage devices to store raw video and audio clips, edited segments, and completed interactive formats: an Iomega Zip drive and cartridges with 100 megabyte capacity as well as an Iomega Jaz drive and cartridges with 1 gigabyte capacity.

Macromedia Director 6.0 was used as the authoring program for the multimedia modules because of its comprehensive features and superior interactive capabilities (Roberts, 1995). The programmer began by thoroughly learning the elements and processes unique to Director and using them to design prototype screens for review by the development team. He identified backgrounds, text, digitized pictures, sounds and video clips to be used as cast members. Cast members represented all elements of the modules that will appear either directly on screen or in the program on screen. For example, a single screen might have several cast members: a title, a narrative, a graphic, an animation, and a video clip. He also incorporated material prepared in other programs such as Adobe Photoshop for use as cast members (Abrams, 1996). He used the score feature of the application to control the sequence of events by which cast members appeared in the modules. For example, in the opening sequence, several photographs pop on screen accompanied by the simultaneous sound of a camera shutter. He then assembled the module screens prepared by the faculty instructor and the audio and video segments prepared by the video producer for incorporation into the multimedia modules. He used the Lingo scripting function to write simple subprograms to operate the interactive formats for practice and assessment activities. He designed a set of navigation aids, including buttons and rollovers, using familiar metaphors such as highlighted hypertext and arrows to assist the learners in controlling their progress through the module (Marra, 1996; Dunlap, 1996).

When the development team assessed the initial programming of the modules and considered the comments of other professional reviewers, they decided that the content and interactive formats of the modules more than met their expectations and represented effective instruction, but they were concerned about the aesthetic quality of the appearance of the module screens. Recognizing that Director is limited in its ability to create sophisticated text and graphics, the team searched for other software programs that offered greater design capabilities. They used Adobe Illustrator and Photoshop to create cast members to be imported into Director: creating new, more interesting background fields with textures; adding dimension to screens by using drop shadows for text and images as well as layering graphics and photos; adjusting colors; and, creating beveled edges for buttons. Disturbed by the dramatic difference between no sound on most text screens compared with prominent sound from video and audio clips, they identified a need tto use more sound. They have purchased some royalty free music and are currently in the process of adding soft background music to the modules, especially at transition times. Concerned that the module content was somewhat dry and unmotivating for learners, they created an animated figure of a star with face and limbs, named "Supervisory Superstar". They have incorporated this character, who speaks and performs simple magic tricks, into the modules to call attention to key points, to facilitate transitions within and across modules, and to serve as a guide, offering prompts about navigation throughout the modules. Recently, they have begun to explore the use of the MPEG-1 compression format, which uses an algorithm that enhances the quality of video segments while it decreases the storage space required. As a result, they have decided to convert all video segments to MPEG-1, which will permit full motion video of 30 frames per second at a storage rate of only five (5) megabytes for a 30 second segment; this chage will allow a greater number of video segments to be used in the modules. Now that they have a better idea of storage constraints, they are considering additional ways to take advantage of the interactive properties of hypermedia, including the possibility of offering enrichment units as well as including video case studies at the end of each module as problem solving exercises. They also plan to add a pretest, a mechanism for keeping track of learner responses, and a posttest to determine performance before, during, and after instruction. When the final draft of the modules has been prepared, the developers intend to field test the modules, using supervisors with experience in the WVU practicum program, to get feedback from actual users about the appropriateness of the content and the useability of the programmed formats.

Conclusion

Multimedia instructional materials represent an important resource for teacher education programs in special education to foster understanding and promote best practice at the preservice or inservice levels. They enable prospective special educators to observe and study many important aspects of professional practice without the time and expense of travelling to and spending time in actual classrooms out during field experiences. They also allow practicing special education personnel to review state-of-the-art practices that may not be currently in operation in their own programs or agencies and can serve as real-life models for the adoption of these innovations. Instructors who are committed to providing the best possible teacher education program for special educators will need to learn to make their own multimedia instructional materials using inexpensive and easy-to-use desktop systems whenever they meed materials that are unique to a particular topic or philosophy or perhaps specific to a particular rural agency or area. With a little equipment, some training, and an investment of time and effort, any individual faculty member or academic program can acquire sufficient, effective, and appropriate multimedia materials to support a teacher education program in special education, whatever their needs, their talents, or their budget.

References

Abrams, A. H. (1996). Multimedia magic: Exploring the power of multimedia production. Needham Heights, MA: Allyn & Bacon.

Alber, A. F. (1996). Multimedia: A management perspective. Belmont, CA: Wadsworth.

Azarmsa, R. (1996). Multimedia interactive video production. Belmont, CA: Wadsworth.

Baggett, P. (1989). Understanding visual and verbal messages. In H. Mandl & J. Levin (Eds.), Knowledge acquisition from text and pictures (pp. 101-124). Amsterdam: Elsevier

Barron, L. C., & Goldman, E. S. (1994). Integrating technology with teacher preparation. In B. Means (Ed.), Technology and education reform: The reality behind the promise, (pp. 81-110). San Francisco: Jossey-Bass.

Blackhurst, A.E. & MacArthur, C.A. (1986). Computer use in special education personnel preparation programs. Teacher Education and Special Education, 9(1),27-36.

Bosworth, K., & Welsh, T. M. (1992). Design and evaluation of an interactive multimedia program for teacher education. Journal of Technology and Teacher Education, 1(1), 15-23.

Bransford, J.D., Sherwood, R.D., Hasselbring, T.S., Kinzer, C.K., & Williams, S.M. (1990). Anchored instruction: Why we need it and how technology can help. In D. Nix & R. Spiro (Eds.), Cognition, education, and multi-media: Exploring ideas in high technology, (pp. 115-141). Hillsdale, NJ: Lawrence Erlbaum.

Brown, J.S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. Educational Researcher, 18(1), 606-638.

Buck, G., Morsink, C. Griffin, C., Hines, T., & Lenl, L. (1992). Preservice training: The role of field-experiences in the preparation of effective teachers. Teacher Education and Special Education, 15(2), 108-123.

Cartwright, G. P. (1984). Technology competencies for special education doctoral students. Teacher Education and Special Education, 7(2), 82-89.

Cartwright, S. (1991, January). Elements of successful video training. AV Video, 1(1), 24-30.

Chen, A.Y. (1993). The use of interactive multimedia systems to improve the learning of classroom practices. Education Research and Perspectives, 20(2), 24-32.

Cognition and Technology Group at Vanderbilt University/CTG-VLTC. (1993). Integrated media: Toward a theoretical framework for utilizing their potential. Journal of Special Education Technology, 12(2), 71-85.

Criswell, E. (1989). The design of computer-based instruction. New York: Macmillan.

Dick, W., & Carey, L. (1996). The systematic design of instruction (4th ed.). New York: Harper Collins.

Dunlap, J. C. (1996). User support strategies. In P. A. M. Kommers, S. Grabinger, & J. C. Dunlap (Eds.), Hypermedia learning environments: Instructional design and integration (pp. 158-172). Mahwah, NJ: Lawrence Erlbaum Associates.

Fidler, R. (1997). Mediamorphosis: Understanding new media. Thousand Oaks, CA: Sage.

Fitzgerald, G.E., Wilson, B., & Semrau, L.P. (1996). Designing effective multimedia programs to enhance teacher problem solving skills and cognitive flexibility. Proceedings of ED Media 96 World Conference on Educational Multimedia and Hypermedia (pp. 234-239). Boston, MA: Conference Press.

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (1998). Supervision of instruction: A developmental approach (4th ed.) Needham Heights, MA: Allyn & Bacon.

Goldman, E., & Barron, L. (1990). Using hypermedia to improve the preparation of elementary teachers. Journal of Teacher Education, 41(3), 21-31.

Hannum, W. C. (1988). Designing courseware to fit subject matter structure. In D. H. Jonassen (Ed.), Instructional design for microcomputer courseware (pp. 151-182). Hillsdale, NJ: Lawrence Erlbaum Associates.

Howes, L. & Pettengill, C. (1993, June). Designing instructional multimedia presentations: A seven-step process. T.H.E. Journal, 20(6), 58-61.

Korolenko, M. (1997). Writing for multimedia: A guide and sourcebook. Belmont, CA: Wadsworth.

Kozma, R. B. (1991). Learning with media. Review of Educational Research, 61(2), 179-211.

Lave, J., & Wenger, E. (1991). Situated learning: Legitimate peripheral participation. Cambridge, England: Cambridge University Press.

Luna, C. J., & McKenzie, J. (1997, February). Testing multimedia in the community college classroom. T.H.E. Journal, 24(7), 78-81.

Macy, D. J., Klapprodt, W., Hammer, E. K., & Macy, S. J.. (1989). Interactive video training for early intervention personnel.Journal of the Division for Early Childhood, 11(3),280-284.

Maddux, C. D. (1994). Multimedia, hypermedia, and the culture of schooling. In W. M. Reed, J. K. Burton, & M. Liu (Eds.), Multimedia and megachange: new roles for educational computing (pp. 21-26). New York: Haworth Press.

Marra, R. (1996). Human-computer interface design. In P. A. M. Kommers, S. Grabinger, & J. C. Dunlap (Eds.), Hypermedia learning environments: Instructional design and integration (pp. 115-137). Mahwah, NJ: Lawrence Erlbaum Associates.

Moore, D. M. (1994). The parable of the expensive ballpoint pen (revisited): Implications for hypermedia. In W. M. Reed, J. K. Burton, & M. Liu (Eds.), Multimedia and megachange: new roles for educational computing (pp. 3-8). New York: Haworth Press.

Myers, R. J., & Burton, J. K. (1994). The foundations of hypermedia: Concepts and history. In W. M. Reed, J. K. Burton, & M. Liu (Eds.), Multimedia and megachange: new roles for educational computing (pp. 39-20). New York: Haworth Press.

Overbaugh, R.C. (1994). An example of software development and authoring with HyperCard: Creating an interactive video simulation for teaching basic principles of classroom management. Computers in the Schools, 10(41), 313-338.

Richards, T., Chignell, M.H., & Lacy, R.M. (1990). Integrating hypermedia: Bridging the missing links. Academic Computing, 4(4), 24-26, 39-44.

Rieth, H.J., et al. (1993). Examining the cognitive challenges and pedagogical opportunities of integrated media systems: Toward a research agenda. Journal of Special Education Technology, 12(2), 118-124.

Roberts, J. (1995). Director demystified: Creating interactive multimedia with Macromedia Director. Berkeley, CA: Peachpit Press.

Salzberg, C. L., Rule, S., Chen, J., Fodor-Davis, J., Morgan, R., & Schulze, K. (1989). Videodisck technology in teacher preparation: Advantages and limitations. Teacher Education and Special Education, 12(2), 33-39.

Sauer , J. (1996). Harnessing the power of digital video. Presentations, 10(10), 57-66.

Shaw, R. (1996). A long and winding road. Video Systems, 22(12), 30-40.

Strang, H. R., Murphy, D. M., Kauffman, J. M., Badt, K. S., & Loper, A. B. (1986). Training classroom management skills via a microcomputer-based simulation. Teacher Education and Special Education, 9(2), 55-62.

Tanaka, A. (1997,March). Audio production techniques for interactive media. Interactivity, 35-42.

Thibodeau, P. (1997, February). Design standards for visual elements and interactivity for courseware. T.H.E. Journal, 24(7), 84-86.

Thorkildsen, R., & Lowry, W. (1997). Producing accessible video-based training on assistive technology. Journal of Special Education Technology, 13(3), 44-53.

Todd, N. (1993). A curriculum model for integrating technology in teacher education courses. Journal of Computing in Teacher Education, 9(3) 5-11.

Volkow, S. W. (1997, March). Interactive media production: What video professionals need to know. Videography, 22(3), 178-184.

Wagner, N. (1996). Telecommunications and the changing nature of instructional delivery. Syllabus, 9(19), 10-12.

Willis, J.W., & Meblinger, H.D. (1996). Information technology and teacher education. In J. Sikula (Ed.), Handbook of research on teacher education, (pp. 978-1029).New York: Macmillan.

Linda P. Thurston, Ph.D.
College of Education
Kansas State University
Manhattan, KS

Betsy Cauble, Ph.D.
Social Work Program
Kansas State University
Manhattan, KS

Janice Dinkel
Social Work Program
Kansas State University
Manhattan, KS

BEYOND BELLS AND WHISTLES: USING MULTIMEDIA FOR PRESERVICE AND INSERVICE EDUCATION

Because of the difficulties of providing timely and individualized education and training for rural practitioners, interactive multimedia can be used to reduce travel costs, deliver quality training, and allow for individual differences in experience, expertise, and learning style. Not all rural professionals are able to leave work to travel to University settings and few courses are offered at off-campus sites. While distance learning opportunities have multiplied greatly in the past several years, the lack of relevant course work and access to the technology necessary to participate in these opportunities may prohibit the wide use of distance education for some rural human service professionals. In addition, few reports focus on evaluating the outcome of technology based distance education.

The curriculum that provides the basis for this presentation was designed specifically to meet these needs and has been demonstrated to be effective in increasing knowledge, competencies, and self-efficacy. To address the unique problems of teaching in rural areas, interactive computer based videodisc instruction was selected as the method of delivering education to rural professionals. The program is being used in rural areas where practitioners can access the instruction at any time and they do not have to drive to a center, nor does a teacher have to travel to the learners. They can receive the information when they need it; there is no need to wait until a group is formed or a consultant or instructor is available.

The delivery method described in this paper is being used in rural areas because it can be used in local offices and schools and can be utilized in staff development and instruction for individuals or groups. The delivery format of training modules, a self-contained computer based multimedia program, uses specific skills development methodology and takes into consideration the range of users' skills levels with computers and supporting technology. The ability of users to control the instructional process and to record their progress allows remediation when necessary or the option to move ahead with the competency is reached.

This study describes the results of using multimedia modules on the knowledge and attitudes of the user, undergraduate social work students.

Introduction

The complicated nature of providing services in rural environments makes specialization and professional development difficult. Contextual factors, such as scarcity of local resources, lack of access to professional tools and materials, and limited availability of alternatives for professional development for rural social workers contribute to this difficulty. Many approaches have been used to provide professional development opportunities for human service workers in rural areas. The lack of a critical number to make in service training cost-effective at the local level often means that training is not delivered in a timely manner. The most common forms of training are workshops, summer institutes, night and weekend courses.

Distance education has emerged as a method to address the accessibility issues involved in providing training for rural human service professionals. Distance education refers to training approaches characterized by the separation of instructor and students (Keegan, 1990). It includes print based media, such as correspondence course and technology based instruction, such as interactive video and computer technologies. Outside experts are linked to local communities that may be a great distance away. Instruction is delivered to the learners' doorsteps with credit courses and entire degrees. Distance education accommodates training that is practical and related to the trainee's job requirements. Because it is field based, it can reduce or eliminate the need to commute to a centralized training site, and it greatly improves the accessibility of training to personnel in rural communities. Distance education provides an opportunity for rural social workers to upgrade their skills when more conventional forms of training are not available to them and offers flexibility in organizing and offering training experiences for local offices (Knapczyk, 1991).

Interactive Multimedia Instruction

Interactive multimedia instruction combines the education benefits of hypertext and hypermedia and is easily transportable to rural offices of human service providers. Hypermedia is an extension of hypertext. It incorporates other media besides text and graphics, such as illustrations, video diagrams, animation, and computer graphics. Learners can branch from topic to topic as they see it, going into more depth in one area or jumping to another related, but different subject, virtually instantly. Text, illustrations, animation, video and other aspect of multimedia are combined, controlled, coordinated, and delivered on the computer screen. Using video, key concepts can be presented in a variety of ways and a variety of visual stimuli can be used. The interactivity of hypermedia and hypertext instruction allows the learner to try a variety of interventions and movers a video or text sequence to logical conclusions, based on the learners' actions. Learners can repeat sequences, obtain feedback about choices, and try responses or interventions that they would never do in real life (Seabury & Maple, 1993). Video images, graphics, text and sound are programmed to rapidly access any information from a single image, a video sequence or a sound sequence.

Kansas Rural Child Welfare Project

To meet the need for specialized training focusing on issues related to child welfare need, a collaborative effort was developed between the Department of Special Education and the Social Work Program at Kansas State University and the Kansas Department of Social and Rehabilitation Services. The resulting interactive multimedia instructional program, "Building Family Foundations", was developed by social work educators, educational professionals, social workers, and a team of educational technology specialists. For a complete discussion of the development of this project see Thurston, Denning, and Verschelden (1996).

"Building Family Foundations" consists of ten multimedia interactive computer based instruction modules that focus on child welfare issues in generalist social work practice. These modules were designed to provide individualized staff development that is based on specific social worker competencies, adult education principles, and the advantages of interactive multimedia (Thurston, Verschelden, & Denning, 1196).

Although the use of technology in distance education and the use of interactive multimedia are increasing, few reports analyze the impact of learning on the attitudes and skills of the learners. The purpose of this study was to assess program users' attitudes toward technology and multimedia, its efficacy as a learning method, and its feasibility for staff development. Additionally this study was designed to assess program users' gains in knowledge presented in the program and their confidence to perform the competencies upon which the program curriculum is based.

Subjects

The subjects were 37 students from the undergraduate social work program at Kansas State University. The students were in the last two semesters of their classroom training prior to their block field practicum. They were divided into two groups, Group I, which was made up of 18 students in Social Work Practice I class, and Group II, 20 students in Social Work Practice II. Use of the modules and participation in the study were requirements of the courses.

Instruments

Each Subject completed pre and post test using the following instruments: The

Building Family Foundations Competency Rating Scale; the Child Welfare Knowledge Assessment; and the Technology Rating Scale. The Building Family Foundations Competency Rating Scale is composed of seventy-six statements developed from objectives and goals of the Family Based Treatment Strategies, Social Workers in Court, Professional Development, Adolescence, and Stress Management modules. Subjects read each statement, consider their ability to use the skill identified in child welfare work, and rate themselves on a scale from 1 (very low) to 5 (very high).

The Child Welfare Knowledge Assessment consists of seventy-four multiple choice, true/false, and matching questions from the review and final test questions in the Family Based Treatment Strategies, Social Workers in Court, Professional Development, Adolescence, and Stress Management modules. Subjects read each question and choose the best answer.

The Technology Rating Scale is a modified version of a computer rating scale used to measure comfortableness with computers. It was modified to include multimedia and staff development. It consists of twenty-five statements related to computers and multimedia. Subjects read each statement and indicate how they feel about each statement using a scale from 1 (strongly agree) to 6 (strongly disagree).

Research Design

Subjects completed pre-tests, viewed the modules, and completed post-tests. Group II completed the post-test twice. One was completed in the fall after the subjects had viewed the *Adolescence* module. The second post-test was completed in the spring after they viewed the remaining three modules. For all three instruments, the interest was in whether or not there was a significant change in the pre- and post-test scores and, if so, in which direction was the change. Additionally, the two post-test scores from Group II were examined for any significant results.

The analysis consisted of paired t-tests from SAS, version 6.10 for the Macintosh. This is an equivalent procedure to the paired t-test in PROC GLM. All analysis of variance model assumptions were checked. Missing values were accounted for via the automatic SAS adjustments.

Results

Results of the Building Family Foundations Competency Rating Scale analyses were positive. For Group I subjects there is an increase from a mean of 2.7 to 4.1 (p=0001). This indicates that the subjects' confidence in their ability to use skills in the *Adolescence* module increased after viewing the module, and that the increase is statistically significant.

Group II subjects also have significant differences between pre- and post-test scores on all modules viewed (p=0001). *Family Based Treatment Strategies* pre was 2.4 and post was 3.8; for *Social Workers in Court* pre was 2.0 and post was 4.0;

Professional Development was 2.8 and post was 4.2; and *Adolescence* score means went from 2.7 to 3.9. These scores indicate an increased confidence in subjects' knowledge of skills discussed in these four modules. Scores for modules not included in this study also demonstrated increases, indicating that other factors may have been responsible for the changes or that some modules produced generalized effects.

Result of the General Knowledge Survey analyses showed that for Group I subjects who viewed the Adolescence module, there is a significant difference between the pre-test mean of 12.2 and post-test mean of 16.2 (p=.0001). This appears to indicate that although test scores significantly increased after subjects viewed the *Adolescence Module*, the entire increases cannot be attributed to learning form the module.

For Group II subjects there is a significant difference between pre- and post- test scores for all modules viewed (p=.0001). Mean scores for *Family Based Treatment Strategies* increased from 10.9 to 14.3 ; *Social Workers in Court* from 14.3 to 16.6; *Professional Development* from 5.5 to 8.8; and *Adolescence* from 12.3 to 13.9. This result indicates that subjects' knowledge in the module content areas significantly improved after they viewed the modules. However, subjects' scores also improved, although less significantly, on Stress management even through it was not viewed by them (p=.02) level of significance.

Results of the Technology Rating Scale analyses were conducted with combined scores for Group I and Group II because this instrument consists of questions that do not directly relate to a particular module but rather to the use of multimedia and computers in general. Mean score decreased form 2.3 at pre-test to 2.0 at post-test (p=0.0001), indicating a more favorable attitude toward technology.

Seabury and Maple (1993) concluded form their work with interactive videodiscs that well designed computer programs can teach social work practice skills to students. The reported study concurs with this conclusion. Findings that users increased knowledge, development a sense of competence in the subject area, and became more comfortable with the use of technology indicate that interactive multimedia is an effective means of providing training in knowledge and skills necessary for child welfare practice.

The design of this study did not allow specification of the independent effects of the various components of the social work classes the subjects were attending that contributed to the their development of both knowledge and competence in the modules' content areas. While it is clear that subjects both gained knowledge and developed competence in the module content area, it is impossible to specifically attribute changes to the modules, class activities, or some combination of factors. However, this concern does not exists for the evaluation of subjects' comfort and attitude toward the technology, which will be increasingly utilized for inservice and preservice education of professionals in rural areas. Currently, the "Building Family Foundations" program is available to and mandatory training for child welfare workers throughout Kansas. Specific modules are also being used in graduate studies in special education and with the social work program at Kansas State University. The project's next step is to expand the evaluation study to include the child welfare workers in the field who are currently using the modules.

Implications form the study for rural areas are great. If the success we have seen so far continues, multimedia interactive training can be made readily available to the rural professional in a variety of fields. this methodology can overcome many of rural service delivery's common challenges, e.g. lack of specialists and lack of specialists and lack of access to professional tools and materials, identified by Merell, Pratt, Forbush, Jentzsh, Nelson, Odell, and Smith (1994). the technology and expertise is available to achieve advanced levels of training for all professionals no matter their location.

REFERENCES

Keegan, D. (1990). Foundations of Distance Education. New York; Routledge.

Knapczyk, D. R. (1991). A distance learning approach to inservice training. Technological Horizons in Education, 12, 68-70.

Merrell, K.E., Pratt, S., Forbush, D., Jentzsch, C., Nelson, S., Odell, C., and Smith, M. (1994). Special education, school psychology, and community mental health practice in rural settings: Common problems and overlapping solutions for training. Rural Special Education Quarterly, 13, 28-36.

Seabury, B. A., & Maple, F. F. Jr. (1993, July). Using computers to teach practice skills. Social Work, 38(4), 430-439.

Thurston, L.P., Verschelden, C., & Denning, J. (1996). using interactive multimedia to address rural social work education needs. In Torre, E. L. (ed) Modes of Social Work Education II: The Electronic Social Work Curriculum in the Twenty-first Century. New Orleans: Tulane University Press.

Welch, M., Gibb, G. S. & Eagan M. W. (1992) Empowering teachers with strategies for efficient learning and functioning through video-assisted staff development. Rural Special Education Quarterly, 1, 35-42.

Dr. Greg Prater
Dr. Jamie B. Lewis
and the NAU Research Team*
Northern Arizona University
Flagstaff, AZ 86011-5774

Piñon Preparation Program (PPP): Meeting the Needs of Rural Native American Students Through Site-based Education Programs

> *Navajo children rarely see a Navajo teacher. There are just too few of them available. As a result, few of these kids ever even think about becoming a teacher themselves. It's a vicious circle. And I really don't see an end to it in sight. The bottom line is that we need more Navajo teachers out there (Stuart, 1963, p.22).*

As this early quote indicates, the issue of the shortage of Native American teachers has been discussed among educational scholars since as early as 1963. Although a variety of approaches have been taken in order to increase the number of Native American educators, only a modest increase has resulted since the 1960s. Recent statistics suggest that only 1% of the teachers in the United States are Native American (Teaching Tolerance Magazine, 1998, p. 12). These programs have ranged from scholarships and other incentives to the development of programs that specifically address the needs of Native American students seeking a college education. For example, Haskell Indian Nations University in Lawrence Kansas developed a teacher education program that specifically addresses the issue of preparing Native American teachers to work in Native American schools. Other colleges of education and universities have actually taken their programs on the road and set up teacher education programs in the reservation communities. Since 1992, Northern Arizona University (NAU) and the Center for Excellence in Education (CEE) has developed several programs across the Navajo Nation. These programs provide Navajo students with the opportunity to obtain their elementary methods courses and/or their special education coursework in their own communities.

The purpose of this study was to examine the experiences of Navajo college students who currently participate in the Piñon Preparation Program in Piñon, Arizona. In this paper we explore the use of site-based delivery as a means for improving retention and graduation rates of rural Navajo students. We also discuss ways in which the stress of finances and family responsibilities is alleviated through community based university programs.

Piñon Preparation Program

The Piñon Preparation Program (PPP) began during the Fall of 1997. Piñon, a very remote community located on the Navajo Reservation, is nestled between First Mesa, Second Mesa and Black Mesa and offers spectacular views of the sun rising and setting on the surrounding mesas. It is approximately 30 miles northeast of Second Mesa, which is on the Hopi reservation and 45 miles southwest of Chinle and Canyon de Chelly, a sacred place for the Navajos. Except for one two lane paved road, Piñon is accessible only by dirt road. During inclement weather, this leaves only one means of access into and out of Piñon. By paved road, Piñon is about a four hour drive from the main campus of NAU in Flagstaff, Arizona. If the weather is pleasant, alternate routes over several miles of dirt road reduces the travel time to two and a half hours. The Piñon Unified School District (PUSD), the Navajo Nation, Bashas (a local chain of grocery stores) and traditional artistic endeavors such as sandpainting, silversmithing and weaving are the main sources of employment.

The PPP is a partnership between the CEE and the Piñon Unified School District. This project is funded by a subcontract that is supported by a federally funded Title VII grant. All the participants in the project are Navajo. Nine are employed by the school district as teacher assistants. One student is a community member and has been assigned to a classroom in one of the PUSD schools. The students in this project made a two year commitment to the program. During this two year period the students receive all of the courses needed to become certified elementary and special education teachers. Prior to their participation in this program, the students took Liberal Studies courses required for admission to the CEE teacher education program and for graduation from NAU. They complete all of their professional education courses on site. In the first three semesters, the students take their foundations, methods, assessment and curriculum courses and their final semester they do their student teaching. The students continue to work in their classrooms until 2:00 in the afternoon. Then, they are released to attend their university classes until 5:00 p.m. Most of the classes are taught by the Project Manager, a faculty member of NAU who lives on site in Piñon. The Project Manager is also responsible for supervision of the students in their classroom placements. Approximately every other week, a faculty member from the main campus in Flagstaff goes to Piñon and teaches all of the classes that week. This releases the Project Manager to do more observations of the students in their classrooms.

Methodology

This study used life stories to explore the experiences of ten Navajo pre-service teachers. The factors that enable and constrain Native Americans to succeed in higher education settings were examined, especially as these factors relate to the students' goals of obtaining certification in elementary and special education. All ten of the pre-service teachers wrote detailed life stories that explored who and what had impacted their decision to become a teacher. In addition, they were interviewed about the benefits of having a site-based program in their community as well as the barriers they faced in obtaining a degree in a traditional university setting. The students were part of the research team for this study and were responsible for collecting the data. These undergraduate students, with the assistance of their university professors, analyzed the data thematically providing rich, detailed descriptions of the experiences of these pre-service teachers. Several themes emerged from the interview data that provide insight regarding the enablers and stressors that these students face in their participation in higher education. These themes were:

1. Family and community support,
2. Financial constraints, and
3. Limited educational opportunities on the Navajo Nation.

Participant Portraits

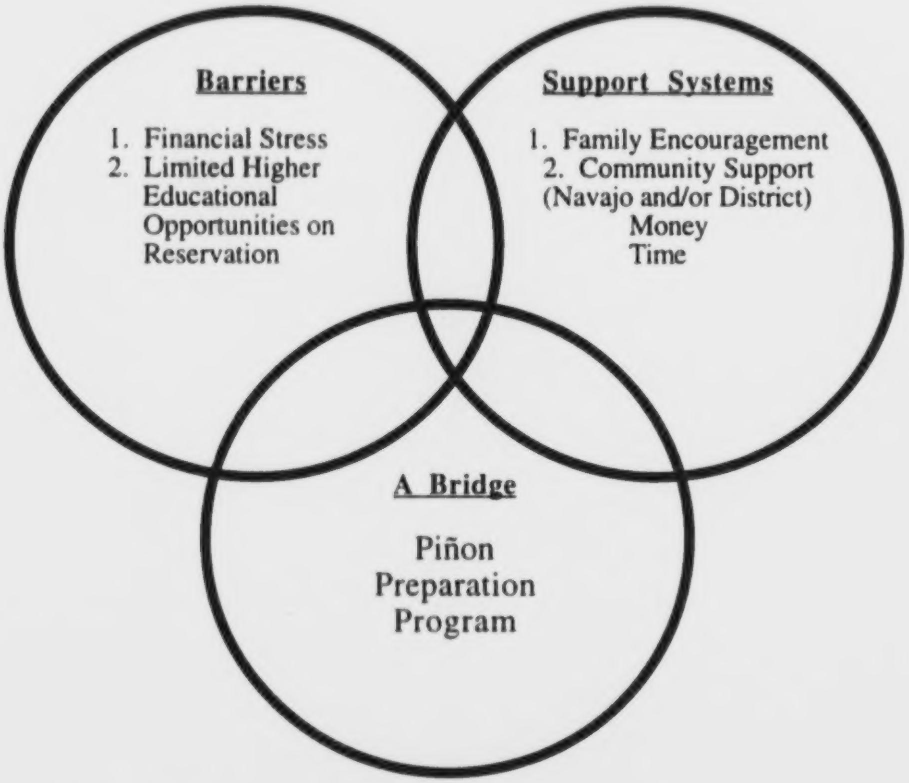
As discussed in the previous section the participants in this study are currently enrolled in the Piñon Preparation Program. In the Table 1.1, the students provide a brief portrait of themselves. The students chose to select pseudonyms as a means of preserving their anonymity.

Table 1.1 Participant Descriptions

Pseudonym	Description
Paula	Paula loves to read Tony Hillerman's books. She is married and has children of her own. She is a reading tutor and she wants to teach on the reservation.
Kelly	Kelly is a mother to four boys. She encourages her boys to read daily and firmly believes as a parent it is important to be a guidance to their education. As a parent, she's involved with her boy's education at school and at home.
Nicole	Nicole is a 27 year old Navajo Indian female who decided to go into education for her own kids and to educate the younger generation. She has been inspired by an aunt and older sister to continue her education.
Valerie	Valerie is an outgoing person who has been dedicated to teach young children since the age of fourteen. She was inspired to become a teacher by her own nieces and nephews.
Susan:	When Susan turned 30 years old, she started thinking about going back to school because she always wanted to continue to learn and she likes to teach students. She has four children and likes to take care of them. She enrolled at Dine College in 1993. Her chosen career is elementary education. She was inspired by her 8th grade teacher (Mrs. Begay) when she attended school at Chinle Boarding School.
Dee	Dee is shy and friendly. She takes her education seriously and wants to be a real good teacher. She is dedicated to her students.
Keri	Keri is a twenty-eight year old Native American Indian from the southwest. She is excited about teaching her students.
Donna	Donna is thirty-eight years old and has a cat named Brody. She is willing to teach the Navajo children to become better learners and to understand the English language.
Diné	Diné is a very proud Dad with four boys. He has a nice wife and loves to teach children.
Mercedes	Mercedes likes to laugh and to be friendly. She enjoys meeting new people and going places.

Introduction

In this study, we found that the families, community and Navajo culture provided these students with support and encouragement to seek a degree in higher education. These enablers took many forms from actual financial support to encouragement that stressed the importance of obtaining an education. We also found that while these students had these enablers, the stressors and/or barriers they faced often outweighed the enablers and prohibited them from obtaining a degree in higher education. As illustrated by the following diagram, the creation of a community-based program provided a way in which to reduce the stressors encountered by these students and enabled them to enroll in a university program in elementary and special education. Although site-based programs can not completely alleviate the stressors and barriers encountered by these students, they can make a difference and serve as one model for creating a higher education environment that recognizes and addresses the needs of rural Native American students. By creating learning environments within the students' communities, they are able to take advantage of the support systems that they have in their community and to face stressors that are manageable rather than insurmountable. In the following sections of this paper, we discuss each of the enablers and stressors in greater detail, as well as discuss how this program has been able to bridge the gap between the enablers and stressors and make a degree in higher education possible.


Barriers
1. Financial Stress
2. Limited Higher Educational Opportunities on Reservation
Support Systems
1. Family Encouragement
2. Community Support (Navajo and/or District)
Money
Time
A Bridge
Piñon Preparation Program

Family and Community Support

In the Navajo culture, one's membership in a family unit or a clan brings about specific responsibilities and relationships with the other members of the family. These family responsibilities are very important and are strongly tied to the traditions and values of the Navajo culture. Often the students find themselves supported and encouraged by family elders and by Navajo communities to obtain an education. At the same time and their own sense of duty and responsibility for children and families require them to stay home on the reservation. In her life story, Donna describes the influence that her grandfather had upon her pursuit of an education:

> I have great respect for my grandfather and his influence on who I am today: He encouraged me to learn the language of the Anglos, but at the same time my grandfather taught us not to forget our Navajo language and the cultural teaching that he and my parents had taught us.

Another student, Kelly, describes her sense of responsibility to her own family and why this kept her from attending a college campus away from the Navajo Reservation:

> Well, I would say, it was too far from home for me, and I think I would rather stay closer to family, to my mother and I think that would be my

> main reason (for not obtaining a degree off the Reservation). And plus I have started a family, so I couldn't just move off the Reservation...

In addition to the support that the students receive from their families, the Navajo Nation also provides many Navajo students with scholarship and stipends to support their pursuit of a degree in higher education. In the case of the PPP, the PUSD applied for a Title VII grant which funded this site-based program through a subcontract with NAU. In addition, the school district has been supportive in other ways, such as providing the students with a flexible work schedule that allows them to begin their university classes at 2:00 p.m. on Monday through Thursday.

Providing site-based higher education programs like the partnership program between NAU and PUSD for Navajo students helps to alleviate the conflict that often arises between the desire to obtain an education and the responsibility they have to their families. Being able to take their college coursework close to home enables them to pursue their degree and keep up close ties to their family and culture. Talk more about the support they receive from tribe and district.

Barriers to Campus-based Higher Education

Limited Educational Opportunities on the Reservation

There are currently many community colleges that offer coursework at various sites throughout the Navajo Nation. Although the community colleges enable the student to take courses in their own community for two years, the students must still spend their junior and senior year away from home in order to complete their degrees. Paula talks about the barriers which kept her from obtaining a degree prior to the PPP she states

> the reason that kept me from getting a degree before I entered PPP was I ... had to travel quite a ways to take classes and (my) financial situation ... kept me from taking classes too. So those are some of the things that kept me from getting my degree.

When four year institutions provide opportunities where the two year colleges leave off, the students are able to complete their degrees without imposing undue financial constraints upon them. The same student identifies the following as a benefit of taking NAU classes at NAU. "I don't have to worry about child care or driving so many miles to attend an evening class."

Financial Support

One of the major barriers which impact many Native American student's decision to attend college off the reservation is the lack of financial resources. Many prospective students are hesitant to leave behind the jobs they have on the reservation and to battle a

> system of financial support which is not always very user-friendly. Native American students in need of financial assistance to complete their higher education must often navigate through a complex and, from their perspective, often mysterious system of agencies including the Tribal Scholarship Office, the campus office of financial aid, and others (Delany-Barmann, Prater and Minner, 1998, p.10).

The students in the PPP experience great financial difficulties with attending college off the reservation. Dee believes that attending classes in her community enables her to pursue her college degree because "it was right close to home and you keep your full time job and go to school while you work." Site-based programs such as the partnership between the NAU and the Piñon Unified School District allow students to continue to keep their jobs. Get name adds that a major concern is "If I go back to school, what source of income would I have to support my family? Plus, the cost of living in the cities is too much." Another added benefit is that since the students are employed in a school and taking education coursework, they can often apply ideas and strategies learned in class the next day in the classroom.

Conclusions and Recommendations

Site-based delivery of teacher education programs is one way in which the shortage of Native American teachers can be addressed. These programs alleviate to some extent the barriers many of these students face in obtaining a bachelor's degree. Since the students remain in their communities, they continue to the receive support of their family and culture and to fulfill the responsibilities that they have to their communities and families. These programs alleviate the stress that arises over the lack of financial support many students experience when they leave the reservation and move to the cities to complete their degrees. Site-based programs enable them to keep their jobs and to continue to live in a community where the cost of living is not a burden. Similar programs have had nearly 100% retention and graduation rates. If institutions of higher education are genuinely concerned with meeting the needs of rural Native American students, as well as with their retention and graduation, the use of site-based education programs is one way in which to provide these students with an opportunity to succeed.

---

*The NAU Research Team consists of the following: Begay, M., Bitsui, S., Blie, L., Bob, L., Bob, S., Castillo, T., Denny, V., Gonnie, J., Hoskie, L., Jim, O.

References

Delany-Barmann, G., G. Prater and S. Minner. (in press). Preparing Native American special education teachers: Lessons learned from the rural special education project. Rural Special Education Quarterly, Spring 1998.

Stuart, M. (1963). Three years on the reservation. Albuquerque, N.M.: Paradox.

Teaching Tolerance Magazine. (1998). Nations within: American Indian scholar Karen Gayton Swisher envisions effective education for all Indian children . Winds of change: American Indian education & opportunity 13 (1), 12-14.

J. Lindsey Stafford
Speech Pathologist
Lawton Public Schools
Lawton, Oklahoma

UNLOCKING CHILDREN'S LANGUAGE DEVELOPMENT

Speech pathologists are encountering more situations in their assessments of young children where the child displays either a receptive and/or expressive language delay that is characterized by a very low vocabulary base. Earlier in my career, I would administer either the Receptive One Word Vocabulary and/or Expressive One Word Vocabulary Test and find that some of the younger children would score between two and three years below their chronological age. When I presented the results with an explanation to the parents, I was usually asked to explain the reason for this problem. My answer then and is still today that **a child's language is the sum of his experiences.** With the emergence of technology, I'll use this analogy: The only measure of the output of a computer is the input you put into the machine.

Our changing society that requires both parents or the single parent raising today's children to work gives them very little time to talk and show children the world they live in. Usually they place the child in front of a television monitor and provide enrichment through television, movies, video games, and now the computer. All of these are fine educational tools, yet they lack one important element---that of human interaction. Parents then ask what they can do to help in building their child's language. I always respond with encouraging them to take the child with them everywhere and point out what they see around them and then name or label those things, as well as show the child how to group or categorize items that share an association. If there are some experiences that they will not be able to share with the child, then they need to read stories that will give the child an idea of them.

My early therapy for children was simply pull out the child, take him or her to my work area, and present series of visual pictures and ask them to identify and classify. Within the past two years, I have discovered the true key to unlocking children's language development. I now go into the child's classroom and share with the entire class a piece of children's literature that is age-appropriate. Using the story as a model, the children then usually develop a class book. Teachers are telling me that the children will then both check the book out of the school library and read it and ask for the class version to be read aloud again and again. It is through these stories that children with low receptive and expressive vocabularies are being given the experiences that they missed in the early years of their lives.

Judy K. Montgomery, Ph.D., who spoke during the LinguiSystems Thirteenth Annual National Language Conference on October 6, 1996 shared with those present the great need to read to children, and especially special needs children, stories aloud. The first discovery children will make is the patterns of language and then the patterns of writing. We must begin reading to children early those stories that exhibit language patterns. It will take at least seven readings of the pattern story before a child with normal language development acquires the pattern and uses it in his own writing. On the other hand, a special needs child with a language development delay will need to hear the same story at least thirty (30) times before it becomes a part of his or her language bank. After reading the story, allow the children to write their own version. Therefore, we need to focus on an ideal intervention that will improve all children's educational achievement.

She went on to connect the learning of language to the making of more literate children. If a child is literate, he or she should be able to speak, read, write, listen. and think with some degree of ability. It would be our hope that all children leave the schools with some ability to do each of these things. We become somewhat responsible when we believe that all children should begin reading by age six. Then these same children should begin using frozen speech or writing at least four years prior to learning to read. Thus, children who are nonreaders now should be writing everyday. Intervention in the classroom is the best placement due to the fact that special needs children can more easily and quickly learn language from those children who already find it easy. Genuine assessment is then to acquire periodic language samples by having them in writing share the stories you've previously read. Using the principles of whole language, you have taken each child exactly as he is and carried him from language found in discourse to finally modification of his own language.

The first step is the selection of the story. It is always good to observe the school building and classroom in order to discover what the theme for the month is. Some simple guidelines for selecting a story are:

- It should have a repetitive pattern that children can duplicate.
- It should have colorful illustrations.
- It should be easy to **tell** or read within the time frame of intervention.
- It should be a BIG BOOK whenever possible.
- It should be available for children to gain access to and read it.
- It should contain a number of words using the same speech sound.
- It should be developed around any language concept.

Remember that there is **no** harm in using a story already read in the class by the teacher. Just like you can see one movie two or three different times and pick up something new each time, children will do the same each time the same story is read to them. I have enclosed a list of the stories I've found very affective during intervention.

Once you have chosen the story, it's now time to decide what concept in language will be the focus. (You may have already done that as you selected the story to read.) The lesson format I've developed may assist you in preparation for carrying speech/language therapy into the classrooms.

Here is a list of resources that may help in developing lessons:

Literature Notes, Vol.1&2
Frank Schaffer Publications, Inc.

Macmillan Whole-Language Big Books Program
Newbridge Educational Program
P.O. Box 938
Hicksville, NY 11802

The Magic of Stories
Literature-Based Language Intervention
Carol J Strong-Kelly Haggen North
Thinking Publications
424 Galloway Street
P.O. Box 163
Eau Claire, WI 54702-0163

Literature Gems
Whole Language Activities for Articulation and Language-Primary
Carolyn Prentice Burden
DLM
One DLM Park

Allen, TX 75002

Testing has shown that literature-based intervention in the classroom does unlock a child's language development. Here are three scenarios of children I've worked with in the past year.

*A six-year-old first grader was given the EOWVT in 1996. At time of placement he had a standard score of 74 and a language age-equivalency of 4 years and 8 months. After a year of intervention in the classroom with help from both teacher and speech pathologist, his standard score on the same test was 78 with a language age-equivalency of 6 years. In a year's time he had made a year and two months improvement.

*A six-year-old first grader was given the EOWVT in 1996. At time of placement he had a standard score of 47 with a language age-equivalency of 4 years and 7 months. After a year of intervention in the classroom with help from both the teacher and speech pathologist. his standard score on the same test was 88 with a language age-equivalency of 6 years and 7 months. In a year's time, he had made two years progress in language development.

*A five-year-old kindergarten student was given the EOWVT in 1996. His raw score gave him a standard score of 73 with an age equivalency of three years and ten months, when he was six years old at time of testing. After a year's intervention in the classroom with the help of both teacher and speech pathologist, his standard score is now 56 with an age equivalency of 5 years and eight months. In a year's time, he had made two years progress in language development.

Barbara L. Ludlow, Ed.D.
Wilfred D. Wienke, Ed.D.
Joan Henderson, M.A.
Holly Klein, M.A.
Special Education Programs
West Virginia University
Morgantown, WV 26506

A COLLABORATIVE PROGRAM TO PREPARE MAINSTREAM TEACHERS: USING PEER SUPERVISION BY GENERAL AND SPECIAL EDUCATORS

The Regular Education Initiative and the Full Inclusion Movement have resulted in the placement of increasing numbers of students with disabilities in regular classrooms. In many rural schools, shortages of special educators mean that the services of special educators may only be available on an itinerant or consultant basis; consequently, the classroom teacher may become the primary provider of individualized programming to meet special needs. From 1994 to 1998, the Special Education Program at West Virginia University was awarded federal personnel preparation funds to develop, implement, and evaluate the Mainstream Practicum Project, a program to assist regular educators currently working in mainstreaming programs in rural areas of the state of West Virginia to earn full qualifications in one or more areas of special education specialization. The project has enabled West Virginia University to expand its existing program to serve a new and growing preservice population: regular educators seeking additional endorsement in special education. These professional personnel (who already have appropriate credentials in either elementary or secondary education) will complete all requirements for state teaching certification in one or more areas of special education (and a Master's degree if desired) via coursework delivered at off-campus centers, plus on-the-job supervision of practicum experiences in their own integrated classrooms. Upon completion of their program of studies, these individuals are fully trained and qualified to deliver state-of-the-art educational services to students with special needs who are placed in regular classrooms in rural schools. The Mainstream Practicum Project was designed both to address the supply/demand imbalance by increasing the number of educational personnel certified in special education as well as to improve the quality of regular education personnel working in mainstream settings by (1) recruiting regular educators from rural areas of West Virginia into field-based graduate certification and degree programs in special education; (2) adapting the practicum service delivery model of the existing training programs in Mental Retardation, Learning Disabilities, and Behavior Disorders at West Virginia University to include a mainstream practicum model; and (3) increasing the pool of available educators trained and dually certified in regular and special education.

Need for Trained and Qualified Personnel

Current employment practices influence both the adequate supply of qualified special educators and the quality of educational programming provided to pupils. Many untrained teachers are hired to staff special education programs on out-of-field authorizations, temporary permits, or waivers (ASCUS, 1996). The demands of teaching special education often lead to stress and "burnout". Such attrition may be particularly severe for rural educators (O'Connor & Rotatori, 1987; Reetz, 1988). Untrained, highly stressed teachers are unlikely to deliver adequate or appropriate instruction to students, and they are very likely to leave their teaching positions (Greer & Greer, 1992). These circumstances have led to a serious shortage of special education personnel, a problem that is at its worst in rural areas.

In 1987, the federal government gave priority consideration to REI programs to strengthen the role of the regular education system in serving pupils with special needs. Since that time ever increasing numbers of pupils with mild-to-moderate (and sometimes even severe) learning and behavior disorders have been placed in regular classes, most often at the elementary level. This has been an especially attractive option for rural schools, where severe shortages of fully trained special education personnel have forced regular educators to supply many of the special services needed by pupils with learning and behavior disorders (DePaepe & Walega, 1990; Zeph, 1990). To date, only a few experimental teacher education programs have undertaken the challenge of jointly preparing regular and special educators to work collaboratively in integrated schools (Bornfield, Dembinski, & Myles, 1991; Feden & Clabugh, 1986). Nevertheless, a number of authorities have predicted that current developments will lead inevitably to full inclusion by the year 2000 (Davila, 1991; Ludlow & Lombardi, 1992; Smith-Davis, 1991). A recent survey of 137 leaders in the field of special education revealed that most professionals believe that special education will become a support system (rather than an alternative system) to regular education, which will take on primary responsibility for serving pupils with special needs (Hales & Carlson, 1992). Thus, the need for appropriately trained regular educators will continue to grow.

In response to these developments, many state education agencies now have reorganized pupil placement options to rely more heavily on the regular classroom as the primary placement. These policies and practices require special educators and regular educators alike to retool to gain the appropriate skills to work effectively in this context. By and large, regular education teachers have been poorly prepared to address the individual needs of pupils with specific learning and behavior problems (Billingsley & Cross, 1991a; Wilson & Silverman, 1991). In addition, they frequently express negative or anxious attitudes about their ability to teach exceptional learners effectively, as well as the effects of mainstreaming on the educational progress of average learners in the class (Aksamit, 1990; Phillips, Allred, Brulle, & Shank, 1990). The few and widely scattered undergraduate preparation programs that seek to prepare regular educators for their mainstreamimg tasks cannot address the training needs of all current elementary and secondary teachers, most of whom have had little or no training or practice related to special education (Brady, Bornfield, & Ilmer, 1991; Calder, 1990). Only a handful of teacher education programs to date have undertaken to retrain regular educators in special education (Billingsley & Cross, 1991b; King, Sears, Rosenberg, & Fagen, 1992); such models, however, have been recommended as possible solutions to address teacher shortages in rural areas by recruiting individuals already established in and/orcommitted to the school system and locale. Peer supervision has been recognized as an integral component of most successful on-the-job teacher training programs (Maynard & Furlong, 1993; McDavid, 1991). Collaboration and collegiality also are hallmarks of effective supervision to promote professional development among special educators (Kozleski, Sands, & French, 1993; Lane & Canosa, 1995).

In West Virginia, as in other places around the country, this situation has led to some problematic personnel practices. State policies and regulations currently permit, indeed, encourage placement of pupils with mild-to-moderate learning and behavior disorders in the regular classroom. A survey of school systems in West Virginia in summer 1993 revealed that several thousand regular educators are presently involved in some aspect of mainstreaming, and that future years will see a significant increase in this practice (Wienke & Ludlow, 1993). Nearly 70% of the administrators responding stated that all regular educators should have additional endorsement in special education, while the remaining 30% felt that teachers needed only inservice training. Many special educators who already have elementary or secondary education credentials have been transferred to regular classrooms where they now serve in the dual capacity as both regular and special educator serving pupils with special needs. Some school systems also have required regular educators to obtain additional endorsement in special education as greater numbers of such pupils have been placed in their classrooms. This practice puts considerable pressure on practicing teachers to enroll in a new preservice program to acquire these additional competencies, precisely at a time when it is impossible for them to give up their teaching positions and financial security as well as when it it is undesirable to remove them, if only temporarily, from service. The Mainstream Practicum Project at West Virginia University was specifically designed to enable elementary and secondary teachers to acquire additional certification in special education while working in the regular classroom setting through a collaborative peer supervision model.

Project Goals and Objectives

The project was designed to accomplish the following goals and objectives:

Goal 1: to design and field-test procedures and materials to develop rural mainstream teaching competencies in practicum students and regular/special education supervisory personnel
- Objective 1.1: to identify rural mainstream teaching competencies to be developed through the practicum experience
- Objective 1.2: to revise existing practicum procedures and materials to incorporate rural mainstream teaching competencies
- Objective 1.3: to revise existing supervisory personnel training procedures and materials to develop skills for promoting mainstream teaching by practicum students in regular /special education cooperating teachers and university supervisors
- Objective 1.4: to design and implement a pre-practicum seminar to refine rural mainstream teaching competencies in prospective practicum students
- Objective 1.5: to evaluate effectiveness of all procedures and materials in developing rural mainstream teaching competencies
- Objective 1.6: to disseminate rural mainstream teaching competencies, along with procedures and materials for developing them in practicum experiences

Goal 2: to design, implement, and evaluate a mainstream practicum model that uses field and university-based personnel to provide supervision to preservice students in on-the-job practicum experiences in rural regular education settings.
- Objective 2.1: to develop a service delivery model for a mainstream practicum model to be added to existing practicum options
- Objective 2.2: to offer the mainstream practicum model to students in the Fall and Spring academic semesters
- Objective 2.3: to evaluate the effectiveness and cost-efficiency of the mainstream practicum model
- Objective 2.4: to disseminate the procedures, materials, and effects of the mainstream practicum model

Goal 3: to increase the supply, quality, and retention rate of dually certified regular/special education personnel qualified to serve pupils with mild-to-moderate learning and behavior problems in rural regular classrooms in West Virginia

- Objective 3.1: to prepare a pool of teachers by the end of the four (4) year project period with dual certification in regular and special education
- Objective 3.2: to assess employment and retention patterns of project trainees to determine their service to pupils with disabilities in rural areas

Project Competencies

The existing certification programs in Mental Retardation, Learning Disabilities, and Behavior Disorders require completion of 12 hours of core courses plus six (6) hours of specialized courses and a 3-6 hour practicum experience in each area; students must complete 9-12 additional credits of required and elective coursework to earn a Master's degree. Existing practicum requirements specify that students must demonstrate fifty (50) program competencies, which are clustered into skills in four domains: preteaching skills, teaching skills, postteaching skills, and other professional skills. A listing of competencies, suggested validation activities, and procedures for documenting competency demonstration is included in the Practicum Handbook. In cooperation with the cooperating teacher and university supervisor, the practicum student reviews program competencies and develops a plan outlining activities to demonstrate them. Supervisory personnel validate the student's demonstration of all competencies, and provide oral and written feedback on his/her teaching performance. Project staff identifed additional competencies needed to accomplish rural mainstream education and incorporated them into coursework, the pre-practicum seminar, and the practicum experience. These additional competencies included knowledge and skills such as:

- --understanding the context of the rural school and its environment
- --recognizing the unique features of serving pupils with disabilities in rural settings
- --identifying best practices in rural education and rural special education
- --identifying effective rural service delivery models for pupils with disabilities
- --developing collaboration and consultation skills for working with rural educators, related service personnel, volunteers, and families
- --using available rural school and community resources to enhance instruction
- --developing personal survival skills for coping with the unique challenges of working in mainstream settings in rural areas

Project Components

Program Development and Delivery

Practicum Eligibility Criteria Modification. Project staff modified eligibility criteria for practicum students and supervisory personnel to implement the Mainstream Practicum Model:

1. eligibility criteria for practicum students:
   a. completion of all required coursework
   b. employment for at least one (1) year in a regular classroom with at least two (2) mainstreamed pupils in the area of specialization for which certification is sought for at least three (3) daily lesson periods;
   c. permission from school authorities for practicum to be conducted in the job setting and agreement to provide one (1) regular educator and one (1) special educator to provide on-site supervision of a minimum of one (1) hour every other week each;
   d. satisfactory performance in the pre-practicum mainstreaming seminar;
   e. attendance at the orientation and enrollment in the practicum course;
2. eligibility criteria for cooperating teachers:
   a. regular educator must:
      i. be certified in elementary or secondary education;
      ii. possess a Master's degree in some area of education or a related field;
      iii. have at least three (3) years of teaching experienced in a regular classroom with mainstreamed pupils with special needs;
   b. special educator must:
      i. be certified in the special education area of specialization;
      ii. possess a Master's degree in some area of education or a related field;
      iii. have at least three (3) tears of teaching experience in special education including consultation with regular educators for mainstreamed pupils;
   c. both cooperating teachers must attend the mainstream supervisor training session and practicum orientation; and
3. eligibility criteria for university supervisors:
   a. certification in one or more areas of special education specialization;
   b. completion of a Master's or doctoral degree in special education;
   c. at least three (3) years of teaching experience in special education including consultation with regular educators for mainstreamed pupils with special needs;
   d. at least one (1) year of prior supervisory experience;
   e. satisfactory completion of SPED 391 Collaborative Consultation; and
   f. attendance at the mainstream supervisor training session and orientation.

Practicum Procedures Redesign. Project staff redesigned all practicum procedures to implement the Mainstream Practicum Model and incorporate mainstream teaching competencies:

1. modification of application and eligibility review process to include criteria for the mainstream practicum model;

2. modification of orientation session to explain requirements and procedures associated with the mainstream practicum model; and
3. addition of a pre-practicum seminar to review strategies for mainstreaming and prepare students for meeting the mainstream competencies;
4. modification of the student evaluation and grading process to incorporate input and from both cooperating teachers as well as the university supervisor.

Practicum Materials Redesign. Project staff redesigned all practicum materials to implement the Mainstream Practicum Model and incorporate mainstream teaching competencies:

1. addition of mainstream practicum competencies eligibility criteria to Practicum Application and Eligibility Review Forms;
2. addition of mainstream practicum competencies and procedures for documenting them to Practicum Handbook;
3. addition of strategies for observing, coaching, critiquing, and evaluating mainstream teaching competencies to Supervisor Manual and Packets;
3. addition of information, resources, and activities related to mainstream teaching competencies and supervisory strategies to the Training Session Materials;
4. development of forms to assess mainstream teaching competencies and to evaluate the mainstream practicum model.

Delivery of Program Coursework. Department faculty have offered all required coursework at six (6) regional off-campus sites at least two (2) times during the project period, enabling students to complete all requirements to be eligible for enrollment in the practicum experience:

1. core courses (SPED 300, 301, 302, 303);
2. specialization courses (SPED 360, 362 in Mental Retardation; SPED 330, 332 in Learning Disabilities; SPED 340, 342 in Behavior Disorders); and
3. degree program courses (SPED 380, 382 and EDP 330).

Delivery of Practicum Experiences. Project staff have offered the Mainstream Practicum Model option in addition to full-time and on-the-job practicum options during each academic semester:

1. practicum experiences were conducted in the eastern half of the WVU service area in the Fall semester; and
2. practicum experiences were conducted in the western half of the WVU service area in the Spring semester.

Project Evaluation Plan

The WVU Dept.of Special Education employs a comprehensive, systematic evaluation plan based upon the Discrepancy Evaluation Model. The ongoing plan consists of measurement at regular intervals of student competency acquisition, student and staff satisfaction with program operation, and graduate performance on the job. Instruments and procedures designed specifically for the department's programs are used to collect data from a variety of sources: students, faculty, cooperating professionals, graduates, and employers. Data are used as input for decisions concerning development and modification of the departm,ent's graduate certification and degree programs. Within this model, program components are considered satisfactory if they meet the department's prespecified criterion of 75% effectiveness; components that fall below that criterion are reviewed by faculty to identify existing problems and potential solutions.

Formative Evaluation. Data were collected during all phases of project operation for formative evaluation purposes to determine modifications in program design and delivery based upon feedback from participants and project staff following the pilot phase and each operational year. These data were provided by participants through self-report questionnaires and focus group interviews and were used to refine operational procedures, measurement instruments, program content, and the service delivery system.

Summative Evaluation. Data collected from all operational semesters has been used for summative evaluation purposes to determine if the project was successful in meeting its goals, as well as whether it was a cost-efficient, workable alternative for practicum experiences in teacher training programs in special education. The following evaluation plan was implemented to assess the outcomes of the project at the summative stage:

1. Data on the effectiveness of the Mainstream Practicum Model was collected by means of survey questionnaires and participant interviews to determine the extent to which the model operated as intended, as well as how well it compared with the traditional practicum model. These data indicated that both students and supervisors were satisfied with the overall operation of the Mainstream Practicum Model, expressing concern only with the extent to which the orientation session prepared them for their responsibilities. Participants were unanimous in affirming the appropriateness of this as a practicum option for assessing competencies for certification in special education as well as a mechanism for promoting effective mianstreaming of students with special needs by regular educators. Several regular educator cooperating teachers reported that the mainstream competencies served as indicators against which they could measure their own performance and that they learned new strategies from observing the practicum student in his or her own classroom.

2. Data on the acquisition of mainstream teaching competencies was collected by determining the number and criterion levels of competencies validated during the practicum experience across all students to insure that every student demonstrated adequate mainstream teaching competencies upon completion of the practicum experience. These data indicated that nearly all practicum students received a rating of strong or weak on most of the mainstreaming competency indicators; a few students received a rating of weak on indicators related to accomplishing IEP goals, addressing pupil social needs, and promoting independence. Other data showed that the regular educator cooperating teachers rated practicum students high in mainstreaming across all success indicators: integration into the classroom, focused learning outcomes, respect for diversity and instructional delivery. Special educator cooperating teachers and supervisors, however, tended to express some concern about mainstreaming success related to pupil learning outcomes, although they rated all other indicators high.

3. Data on the appropriateness of supervision by cooperating teachers and university supervisors to promote mainstream teaching by practicum students was collected by means of review of practicum evaluation forms, self-evaluations, and evaluations by practicum students. These data indicated that the practicum students were pleased with the level of supervision and support from all personnel. The cooperating teachers (both regular and special educators) expressed satisfaction with their collaboration and the interface with university personnel. University supervisors, however, tended to question the role of the regular educator cooperating teacher and the meaningfulness of their contribution to the completion of practicum requirements.

4. Data on the impact of the project on teacher supply, quality, and retention was collected by monitoring WVU student records on number of participants certified, participant employment locations, and length of participant employment. These data indicated that 20 participants completed the program, with 16 participants obtaining certification in Learning Disabilities, 3 in Mental Retardation, and 1 in Behavior Disorders; 6 more participants are scheduled to complete requirements next year. Participants were evenly divided across grade levels, with 11 at the elementary level and 11 at the secondary level. project staff were disappointed in the response to the program, which was significantly lower than anticipated. Informal surveys of potential participants revealed that many teachers are reluctant to become more qualified in special education because they fear that administrators will use this as a rationale place more pupils with special needs in their classrooms.

Program Integration. Project staff are currently involved in taking steps to integrate the components Mainstream Practicum Project into the ongoing program in special education. The model and procedures were used to provide practicum experiences to practicing regular educators in another federally funded project to develop skills for inclusion in teachers of mainstreamed students with learning disabilities during the 1997-1998 academic year. The mainstream practicum model has been added as an option to the existing array of graduate practicum experiences as outlined in the eligibility requirements, application form, and practicum handbook, and will be available to all students in the program beginning with the 1998-1999 academic year. Evaluation procedures for the project have been incorporated into the existing program evaluation plan to insure continuous and comprehensive monitoring and assessment of program operation and outcomes. Faculty also anticipate that the requirements of the mainstream practicum option and the procedures and forms for evaluating mainstream competencies that were developed through this project will be used in future years to structure new practicum models that may emerge as the roles and responsibilities of special educators change to accommodate the growing trend toward full inclusion of pupils with special needs.

REFERENCES

Aksamit, D.L. (1990). Practicing teachers' perceptions of the preservice preparation for mainstreaming. Teacher Education and Special Education, 13(1), 21-29.

Association for School, College and University Staffing. (1996). ASCUS annual job search handbook. Evanston, IL: Author.

Billingsley, B.S., & Cross, L.H. (1991a). General education teachers' interest in special education teaching: Deterrents, incentives, and training needs. Teacher Education and Special Education, 14(3), 162-168.

Billingsley, B.S., & Cross, L.H. (1991). Teachers' decisions to transfer from special to general education. Journal of Special Education, 24(4), 496-511.

Bornfield, G., Dembinski, R., & Myles, B.S. (1991). Issues related to integration/inclusion. In L.M. Bullock & R.L. Simpson (Eds.), Critical issues in special education: Implications for personnel preparation (pp. 39-50). Denton, TX: University of North Texas.

Brady, M., Bornfield, G., & Ilmer, S. (1991). Personnel preparation for integration and inclusion: A proposal for improving the state-of-the-practice. In L.M. Bullock & R.L. Simpson (Eds.), Critical issues in special education: Implications for personnel preparation (pp. 33-38). Denton, TX: University of North Texas.

Calder, C.R. (1990). Restructuring teacher education: One group's perspective. In L.M. Bullock & R.L. Simpson (Eds.), Critical issues in special education: Implications for personnel preparation (pp. 33-36). Denton, TX: University of North Texas.

Davila, R.R. (1991). Emerging trends in special education and implications for training personnel. In L.M. Bullock & R.L. Simpson (Eds.), Critical issues in special education: Implications for personnel preparation (pp. 9-16). Denton, TX: University of North Texas.

DePaepe, J., & Walega, S. (1990). The ecology of integration: A descriptive rural perspective. Rural Special Education Quarterly, 10(3), 49-59.

Feden, P.D., & Clabugh, G.K. (1986). The "new breed" educator: A rationale and program for combining elementary and special education teacher preparation. Teacher Education and Special Education, 9(4), 180-189.

Greer, J.G., & Greer, B.B. (1992). Stopping burnout before it starts: Prevention measures at the preservice level. Teacher Education and Special Education, 15(3), 168-174.

Hales, R.M., & Carlson, L.B. (1992). Issues and trends in special education. Lexington, KY: Human Development Institute at the University of Kentucky.

King-Sears, M.E., Rosenberg, M.S., Ray, R.M., & Fagen, S.A. (1992). A partnership to alleviate special education teacher shortages: University and public school collaboration. Teacher Education and Special Education, 15(1), 9-17.

Kozleski, E., Sands, D., & French, N. (1993). Preparing special education teachers for urban settings.TeacherEducation&Special Education,16,14-22.

Lane, G. & Canosa, R. (1995). A mentoring program for beginning and veteran teachers of students with severe disabilities.Teacher Education&SpecialEducation,18,230-239.

Ludlow, B.L., & Lombardi, T.P. (1992). Special education in the year 2000: Current trends and future developments. Education and Treatment of Children, 15(2), 147-162.

Maynard, T. & Furlong, J.(1993). Learning to teach and models of mentoring. In D. McIntyre, H. Hagger, & M. Wilkin (Eds.), Mentoring: Perspectuves on school-based teacher education (pp. 69-85). London: Kogan Page.

McDavid, T. (1995). Supporting first year teachers with professional development specialists. Teacher Education and Practice,6, 83-85.

O'Connor, N.M., & Rotatori, A.F. (1987) Providing for rural special education needs. In A.F. Rotatori, M.M. Banbury, & R.A. Fox (Eds.), Issues in special education (pp. 51-65). Mountain View, CA: Mayfield.

Phillips, W.L., Allred, K., Brulle, A.R., & Shank, K.S. (1990). The regular education initiative: The will & skill of regular educators. Teacher Education and Special Education, 13(3-4), 182-186.

Reetz, L.J. (1988). Conflict and stress among rural special educators. Rural Special Education Quarterly, 8(3), 22-26.

Smith-Davis, J. (1991). Exceptional children in tomorrow's schools. In E.L. Meyen (Ed.), Exceptional children in today's schools (2nd ed., pp. 495-510). Denver: Love.

Wienke, W.D., & Ludlow, B.L. (1993). Survey of integration policies and pract ices in West Virginia school systems. Unpublished manuscript, West Virginia University Department of Special Education.

Wilson, A.J., & Silverman, H. (1991). Teachers' assumptions and beliefs about the delivery of services to exceptional children. Teacher Education and Special Education, 14(3), 198-206.

Zeph, L.A. (1990). Considering regular classroom options for students with severe disabilities in rural areas. Rural Special Education Quarterly, 10(4), 5-9.

INSTRUCTIONAL DESIGN IN COMPUTER MEDIATED LEARNING*

Kay Sather Bull
Sarah Leigh Kimball
Susan Stansberry
Oklahoma State University

INTRODUCTION

There are those who say that the computer is a non-pedagogical entity. That is, that the computer is only a vehicle for the transmission of information. They cite research that shows that there is no difference between learning in CML environments and the traditional classroom, and they are satisfied with their findings. This, they say, shows that CML is not different from face-to-face instruction, and that when CML is more efficient it can be a substitute for traditional classrooms. Others believe that if we let students take charge of most of their learning, the computer will serve as a facilitative medium, things can be done collaboratively on the computer in ways that cannot be duplicated in the traditional classroom, and the computer mediated learning environment is, in fact, pedagogical, and so is its associated technology.

THE PEDAGOGY OF CONTROL VS. THE PEDAGOGY OF CHOICE

Competing Philosophies: There are at least two competing philosophies and concomitant pedagogies which come into play when you look at ways to design materials for use in Computer Mediated Learning (CML). See http://www.cet.sfsu.edu/moving-courses/teachinh.html or http://www-distance.syr.edu/human.html.

The Pedagogy of Control: The pedagogy of control assumes that those who have the control determine the sequence in which the learner approaches the material to be learned and the pacing at which that material is presented. The teacher determines what the content is that will be presented (see for example http://icg.harvard.edu/~chaucer/pronun_3.0/pr.html). The student is given little or no choice over what is to be learned or the sequence of learning. Teachers have authority and they are in control.

The Pedagogy of Choice: Within the pedagogy of choice, knowledge is assumed to be socially constructed. The typical learning experience is collaborative and cooperative so that social interaction can take place. The focus is on the interaction between the learners trying to develop a solution to an authentic problem rather than responding only to teacher directed/created information. Learning is more open and dialogic (see http://www-csc195.indiana.edu/csc195/wiburg.html). This has also been framed as the difference between instructivism and constructivism. We will take a constructivist viewpoint in this paper.

ASSUMPTIONS ABOUT LEARNING IN THE PEDAGOGY OF CHOICE (see http://ouray.cudenver.edu/~jlteslow/idfund.html)

Reality Is a Mental Construction: When a person sees something he/she relates it to what is already known, and evaluates it in terms of interest, possible danger, the possibility of eating or being eaten, etc. Each person sees a somewhat different environment even if they are beside one another and look at the same things. What we behold is a function of what we know; we can only interpret what we see on the basis of what we know.

Disequilibrium Leads to Learning (Change in Schemata): The way in which a learner learns is to be placed in a situation in which his/her cognitive structure is inadequate to understand or to operate in the environment. The learner is imbalanced and cannot proceed without making a change in the way that environmental data are perceived and knowledge is constructed. To reach new understanding, a change in schema structure is necessary. Growth of knowledge is sparked by feedback from questions, contradictions, experience, and cognitive reorganizations.

Learners Construct What They Learn: The pedagogy of choice assumes that learners construct their own learning. Learners acquire information and transform it based on what they already know and have experienced. They are active learners, and anything they are not active with is unlikely to be learned. Each learner has a discourse history which is based on the previous experiences. All new learning is based on previous learnings. In constructive learning, the assumption is that the learners, with some direction/facilitation from the teacher, will know what is good for them. Learners are capable of acting on this knowledge and will do what they feel necessary to learn what they feel they need to know. From the teacher's view the students become more accountable, they spend more time on clarifying their own thinking through social interaction, and they respond better to questions since they are usually the ones who pose them.

---

*An expanded version of this paper and its corresponding presentation are available at http://home.okstate.edu/conference.

Construction Transforms Information: When information is constructed into knowledge the information is transformed. The transformation relates the new knowledge to the existing knowledge using all of the knowledge which the learner associates with the new knowledge. Hence, individual schema and schema components are different, and each individual has a somewhat different perspective on what is learned than do peers and the teacher. The learner's psychological past (success, failure, motivation, interest) tempers the way in which learning is approached.

Two Methods of Construction - Self-Construction and Social Construction: Piaget describes individual or self construction as the way in which children come to know and understand. Vygotsky (1978) uses social construction and focuses on what learners learn from others, emphasizing the social aspects of learning (see http://www.gsu.edu/~wwwitr/docs/social/index.html). Both are correct. Much knowledge is constructed in social environments where people interact and all learn from the process. When social knowledge is to be learned it is best learned in a social environment through interaction. This interaction involving peers and teacher is normally discussion and inquiry based one or more learners interact to find out about something. For this reason CML should normally be collaborative.

Differential Time Needs: Whether you use a synchronous or an asynchronous approach to CML, you will have to take the students' differential time needs into account. In real time (synchronous), learners will have different reading and writing speeds, and some will type better than others. This will affect the way in which they can interact. Learners will reflect on information and transform it into knowledge at different rates. If adequate reflection time is not provided, some students will not transform the information into knowledge. In asynchronous environments, some learners will have more time to be online than others. They will have personal obligations, like family, which will distract them. You need to make your expectations clear as to how much logon time is needed and how often it must happen if individual learners are to be adequate collaborators in a course. Finally there is machine time. Not all learners will have equal access to a computer at all times of the day and night. Some may have access at work or school, and others only at home. Servers may not always be up. You need to explore access to machine time with new learners and insure that they have sufficient access.

INSTRUCTIONAL DESIGN PRACTICES IN COMPUTER MEDIATE LEARNING

In the constructivist process the learner is, to a great extent, in control of the learning and the teacher is the facilitator who tries to arrange the environment in such a way that the learner can proceed through the learning with as few problems and hesitations as is possible. The teacher can only facilitate the learning that the learner wants to attempt, although suggestions and alternatives can be posed which will help guide the learner into sequences which are facilitative from the view of the teacher. Some of the teacher's functions include making disciplinary knowledge visible, showing learners the links between ideas, showing students how to compare alternatives, and critiquing progress. One of the long term goals is to make the learner self-reliant. The learner eventually should be able to function without any teacher scaffolding or support.

Planning Practices Which Foster Student Development from a Constructivist Perspective

Anchor Instruction in Realistic Settings: Constructivist instruction/facilitation is best when anchored in realistic settings. Learners are more motivated to learn when their learning allows them to work on authentic problems and in settings which are real. Real audiences are provided in CML settings by having learners products displayed on the Internet, advertising the site so that others will visit it, using products for other learners, and developing additions to the discipline home page.

Use Existing Knowledge: Encourage maximum use and examination of existing learner knowledge. You may want to follow traditional design procedure here and remind learners of what they already know so as to facilitate recall of previously learned knowledge. Try to lead participants into learnings which use what they already know in addition to new information to solve real problems. Learners have many resources which they usually do not use. They have been trained in traditional education to wait for the teacher and that the teacher will provide. This usually leads to shallow and surface learning. Deeper learning comes when the learner reflects upon what he/she knows and uses that information to solve problems or to create products. This is the kind of process that should be fostered in collaborative learning.

Promote Learning as an Ongoing Conversation: Social constructivism assumes that learning is a social process where learners learn from each other and from the teacher(see http://www.cl.uh.edu/INST5931/Lesson6 /less6.html). Learners talk about what they are doing, learning takes place in an authentic situation, and the learners are interested in solving real world problems. Learning is a social practice which takes place among people while they are in the process of interacting or modeling. The development of learning comes about through webs of human commitment brought about by webs of conversation. Conversation is an interactive and didactic process based on mutual trust and respect. In a school-based environment, the learning community must provide a psychologically secure environment where it is safe to take risks and easy to trust if collaboration is to be effective. The participants should be sensitive and empathic so that all will be drawn in. More experienced learners guide the less experienced in this learning conversation and the teacher facilitates when needed.

Provide Time for Reflection: Learners need to have time to think about what they are learning. The process of thinking about learning is known as reflection (in constructivism) or metacognition (in information processing theory). Students must be taught to reflect and reflection is useful for deepening the level at which learners know content. Students must think about what they learn in order to integrate it into what they already know. It is a necessary component of constructivism.

Provide Time for Guided Practice: Learners must be given time and opportunity for interactive practice. No learner can gain confidence about ability to perform without being able to use the skills and processes being learned. Practice allows the teacher to provide scaffolding if it is needed and to provide reteaching if the process is completed incorrectly. In collaborative settings practice should be interactive.

Use Flow Charts to Show (Alternative) Structure (Multiple Tracks): Flow charts are useful in showing alternative tracks or paths through the content. In a CML setting, different learners with different learning histories and interests may progress differentially through content. One of the ways the teacher can influence the progression of learners is to provide suggested alternative tracks. Learners will create their own tracks through CML content, if likely looking tracks are not provided. The alternative track flowchart provides a way to provide guidance while giving the student choice.

Create Just-In-Time Learning: Just-in-time learning refers to learning which is provide just when it is needed to do something or complete some process. Learning provided in this way has a high level of motivation for the learner as its lack will impede the acquisition or performance of the learner. When the learner is developing a track through an individually chosen course of instruction, just-in-time learning is what is needed to provide the prerequisites that the learner needs to reach his/her goals (see http://lrs.ed.uiuc.edu/Music-Ed/index.html). This is easily accomplished in a hypertext environment.

Create Just-In-Time Design: Just-in-time design uses the principle of just-in-time learning as part of the CML design process. This can be done by looking at what is needed to perform critical tasks in the learning and listing them in a way that learners who have not mastered the prerequisites can access when they want to perform a higher level task. The usual process is to conduct an abbreviated task analysis of each major content or process area and insure that the major prerequisites have been identified. Then each of these can be programmed as a module which learners can select if needed. Modules will be used for particular learning but should be shared at a variety of levels. For example, a module could be used as a primary method of instruction at one level and as a just-in-time learning at several levels, and as a remedial module for those who have not learned the skills with their first attempt using another format.

Field Test Materials: From the practical design side, you should try your CML materials out before you try them on an entire class, particularly if some of the learners will be at a distance. Page analysis is like frame analysis in the development of instructional programs. You try out each page of content with typical learners and let them read it to see if they can respond correctly. Revise each time there is a problem until several learners have tried it and have had no problems. You will want to plan to use 3-5 learners on your initial run through. If the learners cannot do the tasks when you are there with them, it is certain that many will be unable to do them when they are sitting in front of a computer without teacher support.

Cognitive Practices

Establishing Rules and Norms: Collaborative CML teams need to set rules to insure that all participate and do their part in the collaborative effort.

Set rules collaboratively: Learners should be involved in the development of the rules in a CML environment. The rules should be developed so that the learners are in a psychologically secure environment which allows them to be independent, take risks, and explore without the threat of ridicule or punishment.

Rules reduce conflict: The purpose of having rules is to reduce conflict between the participants. The learners need to set the rules in such a way that all know what they are allowed to do and why. Rules without understandable reasons are the first broken. Learners will not attack each other if they have set rules against it. Rules, at least in a socially constructed environment, are the grease that allows interaction to work smoothly at a distance. According to Ostrom (1990), each collaborative group creates and implements a set of rules. The teacher can facilitate by sharing what other collaboratives have done in the past so that the group does not have to reinvent the wheel. First of all, the boundaries of appropriate interaction need to be clearly defined. There needs to be low-cost conflict resolution mechanisms. The community must monitor the community. Individuals can modify the rules as long as the rights of others are respected by the authorities and the participants.

Teach Self-Regulation: Try to increase student awareness of their own self-regulation of behavior. The student must believe that he/she is incharge of his/her personal learning and behavior. With some learners self-monitoring behavior may have to be taught. Teach monitoring strategies like checking their work in mathematics. Provide strategies that provide them time to reflect on their behavior. Learners should always look at what they are doing as part of the learning process. Provide modeling or mentoring in attention control. Teach journaling, or recording of what they are doing/thinking while they are in contact with the information to be learned. This may help in identifying problems. Self-regulation is teachable.

Losing Self-Regulation: All children start as self-regulated learners. Sand box takes no instruction, other than for safety (don't throw sand). It is only later, after they have had less than optimal experiences in school, that they fail to try. Learners do not try because they have failed. They do not try because they cannot predict that they will have success. The rationale is "Why should I expend effort when I can't see any possibility of a reward or a win at the end of the effort?" To help learners become self-regulating again, we need to allow success, allow participant choice (because they are much more likely to predict success if they can choose among tasks), track control, and have participants reflect upon their learning. They should be stimulated to think about how they achieved success. Is it when they have control? If it is, then providing more control to them should facilitate their learning, and it should help them to see that they can self-regulate.

Promote Reflective Procedural Knowledge: To promote reflective procedural knowledge the learner must not only do the task until he/she has automatized the procedure, but he/she must also think about the procedure and why the steps are taken in the sequence used. However, just thinking about the process is not always enough. To insure that the process works, and that the learner is thinking about all of the steps, you should implement a teach-back technique where the learner who knows the process teaches it to a novice who has not previously had instruction. In the process of teaching, unreflected upon steps in the repertory of the expert will become illuminated as the novice struggles to accomplish the task.

Allow Students to Personalize Learning: Each learner, because of a different learning history, will come away from the learning knowing different things. This should be expected and planned. Learners should be encouraged to personalize their learning and tie it to previously learned information and practice (see for example http://iq.orst.edu/philo201/s96/09eth01.html). Personalized learning will be much better remembered than learning which is the same for all and not relevant to some.

Promote Self-Assessment/Analysis: A self-directed learner needs to be able to determine when he/she has learned. This is done through self assessment. This is a skill that many do not have. They have never had an opportunity to practice self assessment. In fact, many do not even know how to set goals since teachers usually set their goals. Learning and self-assessment starts with goal setting and identifying how to determine if goals have been attained. Have learners brainstorm criteria, select criteria and then test/assess themselves to see if the self designated criteria have been met. Practicing this skill will help learners to determine if they have learned and they will develop the ability to generate criteria and see if they can reach them.

Teach Use of Concept Maps: Cognitive maps, sometimes called concept maps, are designed to show an individuals organization and structure of a particular area of knowledge (see http://www.to.twente.nl/user /ism/lanzing/cm_home.htm). The concept map is a method of representing knowledge which assists in the development of schema. The process developed by Novak, represents structural knowledge. Structural knowledge allows learners to understand the relationships between knowing and applying or using. Structural knowledge is necessary for the use of procedural knowledge as it provides linkages between the declarative knowledge and the procedural knowledge. Concept maps provide an integrated network of relationships and linkages between nodes representing declarative and procedural knowledge (see http://www.icbl.hw.ac.uk/~granum /class/altdocs/dav_alt.htm). The cognitive/concept map is theoretically based in both schema theory, from Piaget and Vygotski, and in semantic networking theory. It should be noted that the concept map is different from the mind map in the sense that the mind map is organized around a single concept and the concept/cognitive map uses multiple concepts. Each individual may create a different map of the same content. The extent to which the maps of individuals correspond indicates the relationships between the ideas that they have organized. For this reason, many CML teachers either provide concept maps or they help their participants create them. In the learning setting, the cognitive map can be used to aid in learning by providing a structure into which a learner can integrate new learning with old learning. Cognitive maps assist in knowledge construction through establishing relationships between knowledge components. If used in a formal way, concept maps specify what concepts have in common and cluster common or related concepts. Learning is facilitated through the establishment of these relationships and by the reflection that takes place as the learner contemplates where to put new information in the existing structure. In a sense the cognitive map is a way for the learner to formalize the construction of new knowledge in a way that is visible to others. This is important when others are to assess the learner's understanding or to diagnose undergeneralization, overgeneralization and misconception. Cognitive maps are useful in communicating complex ideas and in solving problems, particularly those which involve relationships.

Involve All Collaborative Groups in Research: Having a research focus (through data gathering or through text research) provides a focus for learning, and, if the research is learner interest driven, it will create high levels of motivation and interactive participation. Typically we set up research teams of four to ten members, including the teacher or an advanced learner, or a mentor who can function as a facilitator and resource provider/finder. Research teams draw on the expertise of all members, may recruit additional members or solicit external experts, and complete a research based product that goes to a real audience rather than a contrived one.

Promote Idea Generation: Idea generation is fostered through interactive brainstorming. Idea linking can be fostered through seeing others make associations with which a learner is not familiar. In this case, the learner can discuss the association with others to see if it is acceptable to his/her cognitive structure. CML also fosters the development of idea structures which are both hierarchical and sequential. These mutually agreed upon structures form the basis for the development of mutual understanding and the development of a community of learners with a common conceptual base. This concept is clearly seen in Usenet applications where interested learners share information and come to conclusions about a great variety of topics. Usenet is a constructivist process by definition.

Provide Coaching: Part of the collaborative process is the scaffolding that is provided through coaching. Coaches (peer or teacher) help participants elaborate on knowledge and seek understanding and a fullness of meaning. Coaches collaborate with learners to develop solutions in a iterative and recursive process. Coaching should be provided when the learners needs it. The just-in-time idea focuses on the learner and empowers the learner to explore information until the learner feels a need for instruction. This is a time of high motivation where the learner really wants to acquire the information which will lead to goal accomplishment. Instruction should therefore be provided when the learner asks for it. It should be remembered that the learner can also learn from failure and the coach should not try to insure that the learner is always successful. Learners should be encouraged to record and report failure so that they and others can learn from it in a safe environment.

Promote Problem Based Practice: Real problems are the meat of constructivist learning. Promote problem based practice using authentic problems which are selected by and of interest to the learners (for an example from physics see http://weber.u.washington.edu/~augraf/diagnoser/diagnoser.html).

Use Different Designs for Novices and Experts: Different from traditional design theory, constructivist design assumes that experts learn in a different way from novices. The novice does not understand the terminology, the assumptions, the ethics, and the practice of the discipline. These all need to be taught or at least controlled before the learner can solve authentic problems (see for example http://www.unc.edu/courses/nurs117/). The expert, on the other hand, can proceed with only a new piece of knowledge and apply that knowledge using the well known disciplinary framework for problem solving. The novice therefore must get qualitatitively and quantitatively different instruction and may have to perform in alternative authentic environments to be successful and not in danger.

Affective/Motivational Practices (see http://www.soc.hawaii.edu/~leonj/leonj/leonpsy /cognitive.html)

Develop Psychologically Secure Environments: Many feel insecure in learning situations. Participants feel secure when the environment is safe, that is, when they have access to the rewards of learning without threat of humiliation, excessive challenge, or other physical or psychological violence. The CML environment removes the threat of physical violence but it must be carefully crafted to eliminate psychological violence either by teachers or peers. The purpose of a psychologically secure environment is to reduce fear, decrease feelings of dependency and conditional acceptance, and to promote learning. If this is done, learner risk-taking, independence, motivation, and creativity will be improved. In addition, there will be an increase in both social and academic interaction.

Empower Learner Control: When group members are new to collaborative CML learning they will typically want to defer to the teacher as the authority figure. They will want to ask questions and have the teacher be the font of all knowledge. This should be avoided when possible. Remember that unless you build it in, there will be little student control. You will almost always want to refer learner questions to other learners in order to foster dialogue. Questions should be redirected to the group. This can be done gently by sending a message to all in the vein of, "John has asked a very interesting question,--------. What do you think of it and how would you suggest that he go about resolving it? Please share your responses with all group members."

Support Curiosity about Content: Curiosity promotes exploratory behavior. Learners who are curious will want to investigate and to try to find out about the object of their curiosity. Teachers should nurture the learners natural curiosity by presenting controversial material, using advanced organizers, or by illustrating incongruous findings or events. Curiosity will be facilitated by using primary source data related to real problems in which the students are interested. Teachers should use open ended questions that have the potential for multiple correct answers. Open ended questions promote contradictions that foster discussion and promote the development of metaphor as part of explanation. When using open ended questions teachers must provide time for the learner to construct a response. This is one reason why asynchronous formats may increase constructive learning. Ideally, learners will be curious about all content they might contact. In reality they will only be curious about some of it. When students evidence curiosity, teachers should support and foster it as it improves motivation and concomitant learning.

Support Intentional Learning Processes: Lebow (1993) argues that constructivists should support intentional learning processes. The learner has responsibility for learning, but the teacher should embed reasons for learning in the CML itself. This will support the internal motivation of the learner. The teacher should try to provide a learning climate that supports autonomy and relatedness.

Distribute Project Ownership: One of the practices which will help learners collaborate is distributed project ownership. All team members in a collaborative team should be interested in the project, discussion, experiment, or research in which the team is involved. Each learner or pair of learners should have a piece of the project to accomplish based on his/her level of expertise and interest. This distributes the ownership of the project, gets everyone involved, and keeps people interacting if they are to share what they are in the process of creating.

Give More Responsibility: Participants are responsible for contributing to the learning of others, for collaborating, for reflecting, and for providing knowledge which they have already acquired. Learners are also responsible for scaffolding with other learners, sharing knowledge structures and the like. The learners should be reminded of this periodically.

Negotiate for Learning Tasks: In collaborative settings, as in all constructive settings, learners negotiate for learning tasks that fit their needs or interests. Learners dialogue with others, the teacher, and with materials. Learners expand on or adapt materials to build cognitive structures and to extend their discourse histories. Using teachers as a resource, learners can conduct just-in-time research on the Web. What we mean here is that when questions are asked in a collaborative setting, individuals, with teacher assistance at the start, can seek information to answer the questions on the Web. Use of the Web enhances learner autonomy because the learner controls the searches and personally integrates the search results. In a CML environment, teachers should try to make the implicit explicit, show strategies that differentiate the novice from the expert, and show learners how to find appropriate resources on the Web. When the learner controls the searching, instruction supports construction.

Tools in Instructional Design

Give Priority to Knowledge Construction: Priority should be given to knowledge construction. Knowledge is constructed when new information is interpreted and integrated into old schema in memory or when new schema are developed and interpreted through the previous knowledge of the learner. By showing learners the relationships between old and new information and by having the learners use the information in ways that lead them to solve problems, they will construct knowledge when they use information in ways which are meaningful to them. The knowing (understanding) of these relationships cannot be teacher imposed unless the learners are in a sequence leading to participant selected goals.

Develop Advance Organizers: Advance organizers allow learners to select appropriate instruction from a choice menu. Allowing the learner to become an informed decision maker. To accomplish this the advance organizer should show the content and difficulty level of the module to which it is attached.

Use outlines to communicate structure of content: One way to show learners the structure of content is to use an outline. Outlines are most effective when the content is linear and sequential and there are few branched relationships in the content.

Show structural relationships: Cognitive maps (concept maps) are designed to show an individual's organization and structure of a particular area of knowledge. The cognitive map is a graphic method of representing knowledge which assists in the development of schema. The mapping process represents structural knowledge (see http://iatl.fullerton.edu/grporganize.htm). Structural knowledge allows learners to understand the relationships between knowing and applying or using. Structural knowledge is necessary for the use of procedural knowledge as it provides linkages between the declarative knowledge and the procedural knowledge. Cognitive maps provide an integrated network of relationships and linkages between nodes representing declarative and procedural knowledge.

Promote Hypertext for Broadening and Deepening: If you want learners to be able to go through textual material you should provide them with an opportunity to go farther into the content than the typical linear text. This can be accomplished through the use of hypertext (see http://www.ils.nwu.edu/~e_for_e/index.html). Hypertext has links for expansion (broadening) which link to other materials which are beyond the text but which are related, but on the same level. Hypertext can also be designed to allow learners to go deeper into the content by providing definitions for terms, expansion on embedded concepts, and further explorations in line with the text content. This allows learners to go deeper into the content.

Promote Play as Part of Instructional Design: Play is regarded as integral to learning by many constructivists. Play has the following attributes: It is usually voluntary, it is intrinsically motivated, it requires active engagement. There is some make believe quality about it. Work is play if the work is extremely satisfying. When we learn we play if we have not been coerced into learning and we are highly interested in the material or processes to be learned. Play-like environments in CML include games, simulations, virtual interaction spaces, etc. (For play on the computer see http://www.gsu.edu/~wwwitr/docs/mjgames/index.html)

Use Case Studies: Cognitive flexibility theory (Jacobson and Spiro, 1992) asserts that teachers should teach using cases and rich examples. Case studies present a structured case which describes a person, process, company, setting, or the like (see http://curry.edschool.Virginia.EDU/go/capetown/intro.html). Participants analyze the case based on information provided and on case analysis in light of the content that they are learning in the discipline (see http://www.hbsp.harvard.edu/frames/groups/cases/index.html). Students share responses and scaffold each other. The teacher focuses the direction of the dialogue to bring out the desired responses.

Cases as Authentic Learning: Teaching using cases makes the learning more authentic and practical. Edelson, et al. (1995) present methods for scaffolding using multiple case studies in a CML environment. The learners see the case as representing a real world situation and therefore they find the setting for problem solving to be authentic (in teacher education see http://www-csc195.indiana.edu/csc195 /zhao.html). When new information is introduced, links can be made from the case examples to the abstract concepts so that the information can be concretized and presented in a way that the learners can use to tie the new and abstract learnings to their previous knowledge. Because of the rich problem solving context, the instructor can provide multiple forms of information representation trying to find one which will fit with the cognitive structure of each individual learner. All can see how the particular information can be used for their purposes. You should not simplify presentations. You should use cases and complex material as part of the teaching practice. Cases are particularly important when knowledge is anecdotal, experiential, unstructured and nontextual. Provide data on real situations which learners can use to develop solutions to practical problems.

Teach Think Alouds: Consider think alouds if the students have difficulty. In a think aloud, the model describes the thinking process as well as showing the actions necessary to complete the task. The instructor can do think alouds in a CML environment by describing how he/she is thinking about a process as he/she describes the process to the students. When students think aloud, others can follow and learn or provide scaffolding, if needed.

ENCOURAGE STUDENT LEARNING STRATEGIES

Share Perspectives in Learning: Learning is distributed among individuals. Teaching and learning are aspects of the same social process. Different perspectives are arrived at by different learners. Diversity accounts for these multiple constructs. When learners share perspectives in a collaborative way and reflect on the perspectives of others, greater learning takes place.

Learn Through Self-Explanation: Encourage learners to try to explain to peers what they do not understand. In collaboration we talk about what we know and elaborate on what we learn. Collaboration in CML promotes learning through self explanation (you never really understand something until you try to teach it), internalization (learning by talking about it), and appropriation (this is the apprenticeship or the adoption model: you do what I do and you learn how to do it) when working with a more skilled partner or group. Self explanation proceduralizes declarative knowledge during the process of peer tutoring or reciprocal teaching. Learners provide scaffolding for others as they describe the cognitive activity which they use in building an explanation.

Learn from Watching Others: Encourage learners to observe what others do. The presence of colleagues extends one's own abilities according to Vygotsky (1978). We monitor our progress by observing what others do or are capable of doing. This validates what we do, provides a perspective on progress, and provides scaffolding, if we are not as far along as some of our peers. Having colleagues also helps us to articulate prior knowledge through the sharing process as we discuss what we know. This Vygotskian process--internalization--

requires active participation of all participants.

Provide Scaffolding for Peers: When peers ask for assistance or when team members discover that a member has a misconception, peer scaffolding should be offered. This requires a psychologically secure environment, but, when the process has been established, most will find that peer scaffolding is better than teacher scaffolding. The rationale here is that the examples and processes presented are more likely to be on the level of the learner when they are provided by a peer who is not as sophisticated as the teacher in terms of the content. In a psychologically safe environment, the teacher may be the first resource used for scaffolding until students seek help from others. After collaborative groups have been working together for a while, there will be little need for external scaffolding from the teacher unless they cannot scaffold each other and their own internal resources have been exhausted. If teachers do too much scaffolding, much of the value of the collaborative experience designed to help them work together solving authentic problems, will be lost.

Encourage Reciprocal Teaching: Here each learner helps other learners by teaching what he/she knows. There is a shared problem context where all learners know the problem that they are trying to solve. They provide each other reciprocal scaffolding as all take turns teaching the group. In some cases, this may be as simple as reading something (possibly from a reading list) that others have not read. Then the reader can lead the discussion on the new information and teach his/her peers. In this way learners are both producers and critics of the work in progress and they learn self monitoring in the process. Learners share meanings, they share necessary information which with transformation turns into knowledge, and they share conceptualizations and conclusions. They have a division of labor by pooling the different roles and talents needed to solve the problem.

Share How They Remember Information: One of the things that collaborative learners can do to facilitate each other's learning is to share how they remember information. This relates to the ways in which they have constructed their knowledge. Sharing these strategies shows other team members alternative ways to look at information and alternative ways in which to structure the knowledge. This should improve recall as it provides additional ways in which to access the information. Learners should be encouraged to talk about knowledge organization and to share strategies for learning information.

SUMMARY

CML should be based in a pedagogy of choice. Choice reinforces constructivist principles and helps the learner control and understand the information to be transformed into knowledge. Instructional design should be rooted in authentic learning using a social constructivist viewpoint. Learning should be provided relation to cognitive, affective and actional components. Learning best takes place in psychologically secure environments where learners are able and unafraid to try and to succeed with challenging learning related to their interests. A number of tools are recommended including case studies, advance organizers and hypertext. Students should be encouraged to facilitate each other and provide scaffolding and modeling in collaborative settings

REFERENCES

Edelson, D., O'Neill, K., Gomez, L., D'Amic ,L. (1995) A design for effective support of inquiry and collaboration. In J. Schnase and E. Cunnius (Eds.) Proceedings of the conference on computer support for collaborative learning. (pp 107-111). Mahwah, N.J.: Lawrence Erlbaum.

Jacobson, M. J. & Spiro, R. J. (1992) Hypertext learning environments and cognitive flexibility: Characteristics promoting the transfer of complex knowledge. Paper presented at AERA, San Francisco, CA.

Ostrom, E. (1990) Governing the commons: The evolution of institutions for collective action. New York: Cambridge University Press.

Vygotsky, L. S. (1978) Mind in Society, Cambridge, MA: Harvard University

Dr. Susan Miller
Dr. Catherine Medina
Ms. Doris Jones
and the NAU Research Team*
NAU/CEE, Box 5774
Flagstaff, Arizona 86011-5774

The Rural Special Education Project: A Six-Year Evaluation

Six years ago in 1992, the Rural Special Education Project (RSEP) was developed to prepare pre-service special education majors to work effectively with Native American children, their families, and others who live in rural areas. Few would disagree that a critical need exists to prepare teachers to serve these populations in rural, remote and reservation areas. The shortage of teachers from culturally diverse groups, especially among the Native American tribes, is great. Nationally, less than 1% of the total bachelor's degrees are awarded to Native Americans.

RSEP is a school-based teacher preparation partnership involving three entities: the Kayenta Unified School District (KUSD); the United States Department of Education (USDOE), Office of Special Education and Rehabilitation Services, Division of Personnel Preparation; and the Northern Arizona University (NAU) Center for Excellence in Education (CEE). Each contributed major components to support the program.

The site of this partnership is Kayenta, in the northeast Four Corners area of Arizona on the Navajo Nation. KUSD contributes apartments and utilities for the pre-service participants from the NAU campus. It also makes all of its classrooms and teachers available to accommodate the RSEP participants.

The USDOE provides the major source of funding which covers all tuition and books, salaries for the project manager and half-time secretary, and some travel costs. NAU contributes .50 to .75 Full Time Employee (FTE) which includes the activities of the principal investigator and the NAU-KUSD liaison who also teaches at least one special education course every semester. One course each semester is offered to Kayenta via interactive instructional television (IITV) through NAU's extensive satellite system. NAU also provides additional travel support, operational expenses and other miscellaneous costs.

The key elements of RSEP are (a) the selection of the participants, (b) academic preparation, (c) classroom experience, and (d) enrichment activities. Participants are selected on personal interviews, an essay, and the recommendations of either the applicants' NAU professors or their KUSD supervisors. Each year up to 18 participants have been selected. Generally, these students have fallen into one of two distinct groups. One group is comprised of mostly young single Anglo female students from the urban areas of Arizona. The other group consists of older married Navajo females with children. The Navajo participants are employed as paraprofessionals by KUSD.

The majority of the academic courses are delivered by the project manager who is a former KUSD teacher. The project liaison, a faculty member from the NAU campus, travels to

Kayenta every week or two, and also teaches a course on IITV. All courses required for the Arizona cross-categorical certification are taught four afternoons and evenings a week. During their university courses, the RSEP participants are encouraged to reflect on their classroom experiences and to apply theory into practice.

The classroom experience is an important part of the program. The more traditional students from campus spend all morning from 8:00 until noon in KUSD classrooms where they teach Navajo children. Participants have two placements which are typically in two different levels and schools within the district. They are supervised by experienced classroom teachers and the project manager who is a master teacher.

The final element of RSEP is the opportunities the students have to enrich their personal and professional lives beyond their academic preparation. In every year of this program all participants have attended several professional conferences. They have attended at least one national conference and have presented at least once, sometimes twice. They also have cultural activities which include immersion in the Navajo culture for the Anglo students. All students travel to another reservation so that the Navajo participants have an opportunity to familiarize themselves with another Native American culture.

Now in the sixth year of its existence, a body of data is now available to provide a measure of the success of RSEP. Sources of data include retention and graduation rates of participants, journals kept by participants, and comments from stakeholders in the partnership.

During the six years of the project, 97 students began RSEP and 93 remained for the entire year of the program (or in the case of year six, for seven months). Four students began RSEP and did not remain long enough to begin the second semester. The reasons they dropped out of the program were varied but were all related to very personal reasons. One young Anglo male was not able to adjust living in such close quarters in an apartment with other campus students. One young Anglo female was more motivated by the "free ride" than she was to such an intensive program as RSEP and decided to drop out. One Navajo female moved out of state to be with her boyfriend and one moved out of state to escape an abusive spouse.

The 93 participants included 12 males and 81 females. Most of the students (66%) are from Kayenta and the surrounding reservation area. The remaining students (33%) are mostly from the urban areas of Phoenix, Tucson, and Flagstaff. The ethnic distribution of participants is 61% Navajo and 39% non-Navajo.

The graduation rate of RSEP is defined as the rate of participants who have completed the one-year program and have gone on to finish the remaining courses in their degree program and earn their special education certification. Because the NAU special education program is a dual major with elementary education, many of the students have several courses to complete for their elementary major, as well as liberal arts courses. Two Navajo students from the first year of the program are now student teaching. By May, 1998, all 18 from year one will have graduated with their degree and certification for a 100% graduation rate. The following table illustrates the graduation rates for each year since 1992-93. This does not apply to the current year, 1997-98, as the participants will not complete the RSEP portion of their degree until May.

RSEP Graduation Rates-1992–1997

1992-94	83%
1993-94	78%
1994-95	61%
1995-96	60%
1996-97	50%

As is evident, with each passing year the graduation rate increases for the earlier years of RSEP as students gradually but consistently complete the courses remaining in their programs. Personnel from Kayenta have indicated that they no longer experience a shortage of special education teachers due to the presence of RSEP.

Currently, eleven Navajo RSEP graduates are certified teachers and are actually employed by KUSD. Five are special education teachers and six are in the general education classroom. However, since KUSD implements the philosophy of inclusion, the lines are blurred between special education and general education classrooms and responsibilities. In addition, four Navajo RSEP graduates are student teaching in KUSD in 1997-98, a further indication that the district and community will benefit from collaboration in this program.

During the early years of the project, an analysis was done of the journals kept by the non-Navajo more traditional students from the Flagstaff campus. Students were also interviewed to determine what, if any, impact they received from living and learning in Kayenta. Students told of the rich experiences they had that resulted in their increased awareness of Native American culture and children. They commented on the personal and professional impact they gained from the diverse exposure to culture found in the Kayenta area. Many students also told of the problems associated with living and working in an isolated setting, supporting previous recommendations that teacher preparation should be as site-specific as possible.

Other data collected to assess the value of RSEP were comments from key stakeholders in the Kayenta schools. Thirteen individuals were interviewed; the interviewees were five chairs of child study teams, six principals, the superintendent, and the assistant superintendent who was formerly the director of special education for KUSD. Three questions were asked: (1) What short-term benefits has KUSD received from the NAU/KUSD partnership? (2) How has this partnership benefited the NAU students? (3) How do you feel the NAU/KUSD partnership has worked out?

Question 1: What short-term benefits has KUSD received from the NAU/KUSD partnership?

- KUSD teachers have had extra hands in the classroom.
- RSEP students assisted in creating the inclusion model.
- All children in KUSD classrooms had more instructional assistance.
- Through their participation in RSEP, the skill level of the Navajo instructional assistants began to increase immediately.

Question 2: How has this partnership benefited the NAU/RSEP students?

- The program provided real hands-on experiences for students, especially the students from the NAU campus in Flagstaff.
- RSEP students were exposed to the inclusion model.
- Opportunities were provided for a diverse cultural experience for both Navajo and non-Navajo students.
- RSEP participants were exposed to diverse classes and children.

Question 3: How do you feel the NAU/KUSD partnership has worked out?

- In my twelve years in Kayenta I have worked with many universities, even participated in writing grants . . . . The only program that has really come through and produced teachers for us . . . is the NAU RSEP program. This partnership has brought lasting benefits to the Kayenta community.

- The NAU RSEP/KUSD partnership is a model program. (NAU has) created a model coalition between two bodies, higher education at the university level and the public school level. . . . I have never seen a program be this successful before.

- This has been a great partnership that has benefited NAU and KUSD. It should be a model for other universities and other programs at NAU. It has sparked interest in continuing education even for the certified teachers.

- The partnership has really come through for us. (RSEP's visibility) in the community has raised the interest in further education in the entire community.

In conclusion, we have experienced many successes in the Rural Special Education Project. The retention and graduation rates are high; each semester a few more former RSEP students complete their student teaching and graduate with a B.S.Ed. and their Arizona teacher certification in elementary and special education. We are proud of our nearly six-year experience in Kayenta, working closely with KUSD. And we are thankful for the support, financial and otherwise, we have received from KUSD, NAU, and the USDOE. Without the collaboration of these three distinct entities, the Rural Special Education Project would not have experienced such a long record of achievement.

*The NAU Research Team consists of the following: Beach, M., Begaye, D., Crank, C., Delmar, B., Dixon, L., Dove, M., Dugi, R., Fuller, D., Gilmore, E., Grochowski, J., Manygoats, C., Montoya, E., Mullins, J. S., Singer, R., Snyder, M., Webb, R., Zonnie, T.,

The Rural Special Education Project was supported by a grant to the Center for Excellence in Education at Northern Arizona University from the U.S. Department of Education, Office of Special Education and Rehabilitation Services, Division of Personnel Preparation (#HO29B50069). Additional support was provided by the Kayenta Unified School District. The opinions expressed in this article are those of the authors and do not necessarily reflect positions of the USDOE or KUSD.

Harvey Rude
University of N. Colorado
Dept. of Special Education
Greeley, CO 80639

Karl Murray
Judy Stockhouse
National Association of State
Directors of Special Education
1800 Diagonal Rd., Suite 320
King Street Station I
Alexandria, VA 22314

COMING TOGETHER THROUGH COMPREHENSIVE PROFESSIONAL DEVELOPMENT: KEY TO STATEWIDE IMPROVEMENT PLANS

FORMING A PROFESSIONAL DEVELOPMENT ACADEMY

The National Association of State Directors of Special Education, Inc. (NASDSE) promotes and supports education programs for students with disabilities in the United States and outlying areas. NASDSE is a not-for-profit corporation established in 1938. The membership and staff of NASDSE are committed to a performance-based educational system responsive to the needs of all children and youth, including those with disabilities.

A priority goal of NASDSE is to support education reform through systems change efforts resulting in improved educational systems for all children, with a strong focus on the inclusion of children with disabilities. To achieve this goal, NASDSE is establishing a substantial interagency cooperation through the "Professional Development Academy: Enhancing Collaborative Partnerships for Systems Change" to insure higher expectations, opportunities to achieve at higher standards, and positive educational outcome, for ALL children.

The Academy will build on NASDSE's ongoing leadership activities over the past five years which include:

- publication of *Leading and Managing for Performance: An Examination of Challenges Confronting Special Education,* which calls for major changes in the education of children with disabilities and for a partnership of special and general educators in educational reform;
- proposals for significant changes in the Individuals with Disabilities Education Act (IDEA) which emphasized the participation of children with disabilities in the general education curriculum and in broad based accountability programs;
- publication of NASDSE's *Vision for Balanced Accountability* which articulated a model of system accountability, individual student accountability, and input/process accountability;
- development of ongoing professional development programs including two Wingspread Conferences, supported by the Johnson Foundation, on different aspects of educational accountability; and
- implementation of a federally funded *Networking System for Training Education Professionals* professional development project.

THE NEED FOR A PROFESSIONAL DEVELOPMENT ACADEMY

All across the country, initiatives are being formulated at state and local levels to reform education. In the development of the education reform agenda, it has often been unclear where special education fits in the bigger picture of systemic change. Twenty-five years of social and political policy has clearly affirmed the right of children with disabilities to be included in a system designed to provide a free public education for all children of all people. A significant set of issues remain with respect to the creation of a unified system of education which brings together the best practices of individualized education approaches developed through special education and the large majority of educational programs that have been generically described as general education. A fundamental system change is required to bring together the communities of special and general education for the increased benefits to all learners.

The call for educational systems to provide a talented, dedicated, well-prepared teacher for every learner poses a challenge for the ongoing professional development of educators. Clearly the demand for schools and teachers to perform at increasingly higher standards must be addressed through effective systems of personnel development which support the concepts of ongoing assessment of needs and continuous improvement of teaching. As Sparks (1997) asserts, high levels of learning for all students is at the center of what we do as educators. To support this goal, every student must be provided a competent teacher and every teacher must receive high quality preparation, ongoing professional learning, and other support. This brings forth an urgent need for sweeping reforms that create state education systems comprised of competent educators who ensure that all students develop to their full potential.

The Professional Development Academy training curriculum and technical assistance will assist states to think and plan systemically. The academy will help states as they establish and perpetuate substantial interagency, inter-institutional and interdisciplinary cooperation to insure higher expectations, opportunities to achieve at higher standards, and positive educational outcomes for ALL children. In attempting to implement the SIP requirements, enormous challenges will be faced by states and territories. Such major challenges include assisting state leaders to think systemically and to approach change more globally while forming a functioning, collaborative partnership in a collegial environment. These extraordinary challenges demonstrate a great need to create learning communities with the necessary knowledge and skills to increase the education outcomes for all children. From these challenges comes the opportunity to create the infrastructure necessary to support and sustain systemic thinking and collaborative partnerships. The academy's curriculum, training, and sustained consistent technical assistance will help states as they meet these challenges.

THE PURPOSE AND OBJECTIVES OF THE ACADEMY

The purpose of the Academy is to assist states in the establishment and perpetuation of substantial interagency, inter-institutional, and interdisciplinary cooperation through the Professional Development Academy designed to insure systems change in support of educational reform. A substantial goal in support of this purpose is the creation of higher expectations, opportunities to achieve at higher standards, and positive educational outcomes for ALL children. These efforts are directed at the initiation and attainment of State Improvement Plan (SIP) requirements of the IDEA'97 Amendments (Part D, Section 653). The intent of these efforts is designed to assist state leaders to think systemically and approach educational reform more globally through achievement of the curriculum objectives which follow (See Table 1).

TABLE 1

Professional Development Academy: Enhancing Collaborative Partnerships for Systems Change

Objectives:

---

1. Form functioning/collaborative partnerships across all agencies concerned with the appropriate education of all learners.
2. Foster state infrastructures which support and sustain systems thinking and collaborative partnerships to enhance the education of all students, including those with disabilities.
3. Provide new knowledge, skills, and enhanced dispositions about leadership for best instructional ans assessment practices to state leaders, with priority for participation afforded to members of traditionally under-represented groups (i.e., racial minorities, women, individuals with disabilities, etc.) and aspiring state leaders.
4. Create networks and form learning communities within state systems to achieve high expectations for all learners through accommodations of existing assessment and curriculum.
5. Develop technical assistance systems to participating state teams for sustained educational reform supporting higher quality instruction over a multi-year commitment.

CONNECTIONS WITH IDEA '97, THE SIP, AND PERSONNEL DEVELOPMENT

The IDEA '97 re-authorization Parts B, C, and D of the Act emphasize the importance of personnel development, stating requirements and suggestions in order for states to play a supportive role in the professional development of all those who work with children with disabilities. The significance of professional development and expectations for in-depth, ongoing, and systemic change are clear. The need for high-quality professional development, with rigorous and relevant content, strategies for implementation, collaborative partnerships, and ongoing support creates the opportunity to develop a Statewide Improvement Plan (SIP) to meet expectations and demands.

THE ACADEMY IMPLEMENTATION PLAN

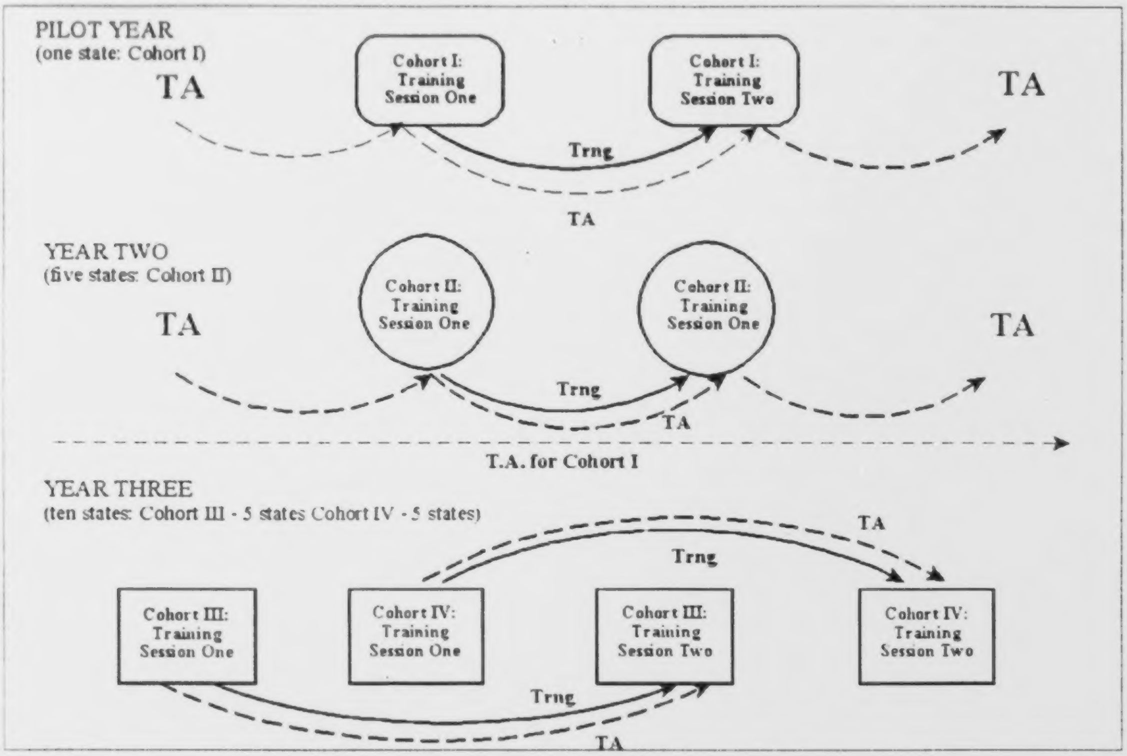
The Academy will begin with a pilot year training one state team, made up of key personnel, with continued technical assistance for a second year. The second year of the Academy, a cohort of five states will complete two training sessions, with sustained technical assistance their second year. The third year, the Academy will begin the full cycle. Two cohorts (each cohort containing five state teams) will complete two training sessions, with sustained technical assistance their second year. (See Table 2). As the Academy continues, training will expand to two cohorts per year (bringing the total number of states trained per year to ten), with sustained technical assistance for the second year. Through Academy training sessions and sustained technical assistance, the state teams will have a written, collaboratively developed plan for immediate use, and the skills and knowledge needed for the ongoing implementation of the systems change activities in their SIP.

BEST COPY AVAILABLE

TABLE 2

Professional Development Academy: Enhancing Collaborative Partnerships for Systems Change

Training and Technical Assistance


PILOT YEAR
(one state: Cohort I)
TA
Cohort I: Training Session One
Cohort I: Training Session Two
TA
Trng
TA
YEAR TWO
(five states: Cohort II)
TA
Cohort II: Training Session One
Cohort II: Training Session One
TA
Trng
TA
T.A. for Cohort I
YEAR THREE
(ten states: Cohort III - 5 states Cohort IV - 5 states)
TA
Trng
Cohort III: Training Session One
Cohort IV: Training Session One
Cohort III: Training Session Two
Cohort IV: Training Session Two
Trng
TA

THE ACADEMY'S CURRICULUM

The Academy's training is based on an integrated rigorous curriculum; contains research-based content; leads personnel through strategies for state-specific implementation; allows for ongoing support; and is driven by long-term technical assistance. Through the training process, opportunities for rural and small school educators, policy makers, administrators, teacher trainers, special educators, and parents to collaborate and form networks. The Academy director and assistant will gather pertinent data during an initial technical assistance meeting with the state team before the training sessions begin. The data collected will be used throughout both training sessions to reinforce, connect, and apply the session content with the needs of the state. During that time connections between the Academy curriculum, tasks to connect the training sessions with relevant state needs, and state commitment will be carefully examined by the state team.

The Academy curriculum sections, which reflect IDEA '97 requirements and expectations, are organized around five content areas: Systems Thinking, Leadership, Organizational Change, Creating Collaborative Partnerships, and Systems of Accountability. Each curriculum area and purpose are listed in Table 3 below.

Table 3

Professional Development Academy: Enhancing Collaborative Partnerships for Systems Change

Curriculum Purpose and Content Outline

Section I: **Strategic Thinking**

Purpose: Individuals bring dynamic and innovative changes to their personal and professional lives as they apply strategic thinking to their repertoire of leadership options. Strategic thinking is the prerequisite to strategic planning and strategic action. With practice and experience, leaders and managers can move their organizations to think strategically and create the future they want for their organizations, markets, clients, or constituents. The "Strategic Thinking" Curriculum leads participants to think about how they think, reflect, and make choices, and to incorporate strategic thinking in their leadership styles.

Strategic Thinking Curriculum Outline:

1. Strategic Thinking as the Fundamental Basis for Change
2. Attributes of Strategists
3. A Comparison of Strategic and Non-Strategic Thinking
4. Thinking About How You Think
5. Strategic Thoughts for Making Changes in Your Own Life
6. Applications for Your Organization

Section II: **Leadership**

Purpose: The purpose of the "Leadership" Curriculum is to facilitate a system of leadership development which involves state teams in developing new and enhanced knowledge, skills, and dispositions as dynamic leaders who contribute as agents for systems change. Improved systems result in higher levels of educational attainment for all learners through the support of talented, creative, and well-prepared educators.

Leadership Curriculum Outline:

1. Theoretical Leadership Frameworks
2. Leadership versus Management
3. Change Process
4. Vision versus Mission
5. Leadership Effectiveness
6. Individual and System Accountability Through Leadership

Section III: Organizational Change

Purpose: The purpose of the "Organizational Change" Curriculum is to empower all levels of education practitioners within the state team as they explore and identify change strategies. These change strategies will result in enhancing the systems thinking as they develop learning communities. The core of these unique learning communities is centered on acknowledging, enhancing, and sustaining values and beliefs that ALL community members learn and contribute in many different ways. This training will positively affect personal, professional, and systemic change in educational organizations, as participants engage these tools in the process of implementing organizational change at the individual, small group, and systems levels.

Organization Change Curriculum Outline:

1. Organizational Change at the Personal Level
2. Organizational Change at the Team Level
3. Organizational Change at the Organization Level
4. Organizational Change at the Systems Level
5. Organizational Change at the Strategic Level

Section IV: Collaborative Partnerships for Personnel Development

Purpose: The "Collaborative Partnerships for Personnel Development" Curriculum will assist state teams as they work with all stakeholders in order to recognize, establish, and maintain collaborative partnerships. Collaborative partnerships depend on the right mix of leadership, support, resources, people and plan of action. This training focuses on how to incorporate the characteristics of successful partnerships and build collaborative teams at the state, local and regional levels.

Creating Collaborative Partnerships Curriculum Outline:

1. Definition and Facilitation of Effective Collaborative Partnerships
2. Identification of Needs and Resources of Potential Partners
3. Establishment and Maintenance of Collaborative Partnerships
4. Identification and Resolution of Common Challenges to Effective Collaborative Partnerships

Section V: Systems of Accountability

Purpose: The "Systems of Accountability" Curriculum, building on the report of the Wingspread Conference on Accountability, assists state teams in identifying and applying guiding principles for an inclusive accountability system. Shared responsibility between all state team members, shared responsibility between general and special educators, and an emphasis on building partnerships across service delivery systems helps state teams to emphasize an effective balanced accountability system.

Systems of Accountability Curriculum Outline:

1. Significance of Accountability in Education
2. Guiding Principles of an Inclusive Accountability System
3. Phases of an Inclusive Accountability System
4. Accountability for System Standards
5. Accountability for Inputs and Process
6. Barriers and Implications for State Teams

SUMMARY

The Statewide Improvement Plan (SIP) holds expectations high for personnel development as a part of the successful impact resulting in systemic change. Rural special educators benefit from the opportunities of networking and collaborating through the personnel development training expectations of the SIP. Training in leadership theory and practice for systems change, and ongoing technical assistance create opportunities for rural special educators to network and form learning communities. Access for all educators for professional development opportunities is imperative to successful implementation of the Statewide Improvement Plan. Professional development as a part of a system wide effort is the key to making this happen.

REFERENCES

Fields, M. (1993). Leading and Managing for Performance: An Examination of Challenges Confronting Special Education. Alexandria, VA: The National Association of State Directors of Special Education, Inc.

National Association of State Directors of Special Education, Incorporated. (1996, November). NASDSE's Plan for Strategic Action. Alexandria, VA: Author.

National Association of State Directors of Special Education, Incorporated. (1997, May). Overview of the Professional Development Requirements: 1997 IDEA Amendments. Alexandria, VA: Author.

National Association of State Directors of Special Education, Incorporated. (1997). Preparing for the State Improvement Plan. (Unpublished Paper, Networking System for Training Education Personnel Project). Alexandria, VA: Author.

National Association of State Directors of Special Education, Incorporated. (1997, November). Guiding Principles for an Inclusive Accountability System. Alexandria, VA: Author.

Sparks, D. (1997). Ongoing Professional Development. Presentation. Washington D.C.: U.S. Department of Education's 1997 Regional Conference on Improving America's Schools / Call to Action: Working Together for Equity and Excellence.

U.S. Department of Education. (1996). Improving the Individuals with Disabilities Education Act: IDEA reauthorization. Washington, DC: Author.

U.S. Department of Education. (1997, October). Federal Register. Vol. 62, No. 204. Washington, DC: Author.

Harvey Rude
Professor of Special Education
University of Northern Colorado
Greeley, Colorado

Barbara Dickinson
Associate Professor of English
University of Northern Colorado
Greeley, Colorado

Jerry Weiser
Principal
Valley High School
Gilcrest, Colorado

TEACHER EDUCATION PARTNERSHIPS AT VALLEY HIGH SCHOOL

Introduction

The efficacious preparation of future teachers remains a topic of considerable interest and debate among teacher educators, teachers, school administrators, parents, and preservice teacher candidates alike. The traditional dichotomy between theory and practice in preparing future teachers has challenged teacher educators to identify more effective means of integrating wisdom from the world of practice and emerging best practices based on systematic research (Teitel, 1996). This paper identifies the efforts of a university teacher preparation program working in collaboration with the faculty of a rural high school to provide a professional development school model of preparing future teachers. The key elements of the partnership model are based on Goodlad's (1994) four functions of partner schools which include: preparing educators, providing professional development, conducting inquiry, and providing an exemplary education to p-12 students.

Contextual Information

Valley High School is one of five partner high schools that have affiliated with the University of Northern Colorado's Secondary Teacher Education Program (STEP). In addition to the STEP program, the University also offers teacher preparation programs at the elementary, middle school, and K-12 specialist levels which include partner school components. The content and structure of the teacher education programs varies by program level. This descriptive paper provides information on the following: identification of the process employed to form the partnership between the University and Valley High School; description of the program content including curriculum, program standards, performance assessment approaches and field experiences;

delineation of the specific knowledge, performances, and dispositions expected of teacher candidates to meet the needs of exceptional students enrolled in the high school program; explication of the various incentives to the school for participation in the partnership; and, identification of present challenges and future opportunities to be addressed to sustain the partnership.

Valley High School is a comprehensive high school of approximately 600 students serving students in a rural western state. Thirty-five percent of the student body is Hispanic, while the majority of students is white, not of Hispanic origin. While serving a geographically diverse area of the state, the three largest towns from which students enroll at Valley encompass populations of 1783, 1084, and 1515 respectively. An elementary school serving grades K-5 is located in each of the three communities, and two middle schools serving grades 6-8 are located in the two communities north and south of the town which contains Valley High School. The major industries supporting the school district include agriculture and oil production. The public support for education in the school district is favorable as evidence by a successful $35 million bond referendum two years ago which renovated and expanded each of the district's six school buildings.

Partnership Formation

A long standing relationship existed between the University and Valley High School prior to the conceptualization of a professional development school model of preparing high school teachers. This relationship had consisted of regular placement of early field experiences and student teachers in a variety of disciplines such as mathematics, science, social science, foreign language, English, and special education.

One year prior to the implementation of the new STEP program model, teacher and administrative leaders were approached with a request from the University to pilot selected aspects of the new field based curriculum. Over the course of two semesters in school year 1995-96, teams of University faculty worked with small cohort groups of teacher candidates to field test the design of the new curriculum at Valley High School. During the course of this year, a number of planning and visioning meetings were conducted with representatives from both organizations to develop a shared vision for the future success of the partnership. In the first year of full scale implementation which took place in 1996-97, a variety of structural issues such as role definitions, supervisory responsibilities, planning processes, and incentives for participation were agreed upon. Support for these efforts were available through the participation of both organizations in the state's Partnership for Educational Renewal, one of the sixteen recognized settings in John Goodlad's (1994) National Network for Educational Renewal. The major priorities of the state's Partnership for Educational Renewal were: to support and increase the capacity of partner schools; to enhance the professional development opportunities for school and university educators; and to support the cultivation of reflective inquiry at each partner school.

Program Content

Since receiving a state mandate in 1987, all teacher education candidates at the undergraduate level of collegiate study are required to complete a liberal arts major in a recognized discipline. Additional policy statements require all undergraduate programs of study to be completed within a time period of four calendar years or eight academic semesters. In response to this policy climate, the STEP curriculum provided one-third of the program requirements, general education coursework accounted for one-third of the program, and the liberal arts major constituted the remaining one-third. To achieve program coherence and integrity of outcomes, the STEP was organized around four program phases which included: (a) phase one, completed early in the sophomore year, with a focus on exploring teaching and a variety of foundational issues in education such as diversity/multicultural perspectives; (b) phase two, typically completed by candidates classified as late sophomores or early juniors, provided guided opportunities for interactions with students paired with in-depth content from special education and educational psychology; (c) phase three, which enrolled late juniors or early seniors, provided clinical experiences in concert with content from the disciplines of educational technology, content reading, and instructional methods; and, (d) phase four, at the end of the undergraduate experience, which comprised a full-time student teaching assignment.

Program standards based on the STEP knowledge base were identified in seven major categories including: diversity; assessment; knowledge of disciplinary content; the democratic ideal; knowledge of learning/pedagogy; communication; and professional behavior. Benchmarks of expected knowledge and performance on these seven dimensions were developed as statements of criteria for the four distinct phases of the program. The most significant innovation of the program design was the concentrated placement of teacher candidates and university professors at the school site. The partnership team of university faculty in the first two years of full implementation have been faculty from the disciplines of English and Special Education. By design, the partnership team at each partner school will represent one faculty member from the College of Arts and Sciences and one from the College of Education. Through frequent interactions with teacher candidates by means of observation, seminar, portfolio review and critique, and advisement, a coherent picture of the capabilities of teacher candidates was obtained very early in their program.

Expectations for Competence in Special Education

In phase one of the program, a foundational base of knowledge was expected of each teacher candidate on the dimensions of diversity and multicultural perspectives. Students were expected to gain a broad exposure to the school culture during phase one through a variety of observational and small group instructional experiences. Throughout phase two, teacher candidates received an opportunity to concentrate on meeting the needs of students with disabilities. In addition to completing a three credit class on instructional modifications and adaptations for exceptional learners, each teacher candidate completed special education based assignments in a field based seminar and field experience combination at Valley High School. Phase three expected competence in instructional methods through concurrent completion of a discipline based teaching methods course in concert with a field based clinical experience which required a minimum of five supervised lessons from each cooperating teacher. The issues of student individualization were expected within a fifteen week, full-time student teaching placement held during the last semester of the teacher candidate's program.

Incentives for Faculty Participation

Effective partnerships typically have clear, mutual goals and the commitment of resources to sustain the partnership and its activities. McGowan (1990) identifies nine essential elements for effective collaboration which include: (a) adequate time for trust and cooperation to build; (b) perks or payoffs to support the development of the collaboration; (c) formalized administrative support from each represented organization; (d) a core group of committed individuals; (e) collegiality that encourages mutual respect and input from all participants; (f) a guiding mission and/or vision; (g) a model or a structuring process to focus efforts; (h) training since collaboration demands large quantities of cooperation, communication, and trust; and, (I) a sense of reality.

In recognition of the increased demands being placed on the host teachers at Valley High School, and responding to the different level of involvement of University faculty, a series of program based incentives were developed to support the partnership (Rude, 1998). One of the major facilitating factors which enhanced program success was the identification of two Site Coordinators drawn from volunteer faculty at the school. In recognition of the time invested by the Site Coordinators, a dollar amount equivalent to one day per week of substitute teacher salary compensation was provided to the school. The disposition of these dollars was determined by the school faculty, with the understanding that these resources could be used in any means which would enhance the partnership (e.g., stipends to Site Coordinators; equal amounts to each participating teacher; applied to professional development activities, etc.). In addition, a modest dollar amount was provided to the school for each teacher candidate completing a field based experience at the school site. Perhaps the most tangible incentive to the school was the provision of eight hours a service to the school on the part of each teacher candidate who was placed at Valley High School.

Additional partnership incentives that have been discussed will likely become more important in the near future. The provision of professional development events and activities holds great promise, as does the creation of systematic programs of inquiry that foster faculty in the role of teacher as researcher and or reflective practitioner (Schon, 1987). The ultimate purpose of the partnership, with an emphasis on simultaneous renewal of schooling and teacher preparation, is the enhanced capacity for the high school students to learn at higher levels of performance. This is critical with the increased expectations for students to attain higher standards of performance in today's schools (Sparks, 1997).

Present Challenges and Future Opportunities

As alluded to earlier, the theoretical base for the STEP is taken from Goodlad's (1994) national Network for Educational Renewal which emphasizes the simultaneous renewal of schools and teacher preparation programs. A major thrust of these efforts is to prepare and sustain professional educators who are thinkers, inquirers, and excellent teachers of all students. A substantial reliance on the work of Fullan (1994) and Hall & Hord (1986) has taken place in the process of implementing the program innovations. As with all significant innovations, the intended outcomes seek to make fundamental changes in the system which defines education for university teacher candidates and high school students alike. The impact of deep change (Quinn, 1996) provides significant changes in the roles of the professional educators at the school and university who are entrusted with the responsibility for creating improved outcomes for these groups.

Some of the more significant challenges to the future success of the partnership at Valley High School include the following: (a) shared vision, which encompasses the willingness to consider both strengths and weakness of the current system, articulation of desired changes, and the strategies for making the desired changes (Anderson, 1993); (b) strong leadership is essential to keep everyone focused on the vision and provide needed inspiration and encouragement (Quinn, 1996); (c) a balance of bottom-up and top-down support which is essential to avoid fragmentation and/or overload (Fullan, 1996); and, (d) structural support which encourages creative tension and the creation of advancing structures when the differences between actual and desired status of the partnership seems vast (Senge, 1990; Fritz, 1989).

Finally, the development of results oriented accountability measures and systems are being integrated into the program design. The National Association of State Directors of Special Education (1995) advocates a model of balanced accountability that focuses on three dimensions including: (a) input and process accountability which insures equity in program construction; (b) accountability for student learning outcomes which insures learner outcomes for high school students and university teacher candidates; and, (c) accountability for systems standards which guarantees program effectiveness. Data on these dimensions are presently being collected which will inform future program modifications and adjustments.

Summary

In 1996, the National Commission on Teaching and America's Future issued a report with five recommendations designed to improve the teaching and learning in today's schools. These five interlocking changes proposed by the Commission are as follows:

- Get serious about standards, for both students and teachers.
- Reinvent teacher preparation and professional development.
- Overhaul teacher recruitment and put qualified teachers in every classroom.
- Encourage and reward teaching knowledge and skill.
- Create schools that are organized for student and teacher success.

The Secondary Teacher Education Program was designed prior to this report being issued. It is interesting to note the overlap in the two developments. As a teacher preparation program that is based on standards and assessments, the first change is directly addressed. With the partner school model and philosophy, changes number two and five have high potential for success. With the ongoing commitment to working in partnership on the ideals of simultaneous renewal, teacher preparation and professional development will proceed hand in hand. The partnership has a strong potential to create schools which represent learning communities that promote successful stewards of educational excellence for all learners.

References

Anderson, B. L. (1993). The stages of systemic change. Educational Leadership, 51 (1), 14-17.

Fritz, S. (1989). The path of least resistance. New York: Fawcett-Columbine Publishers.

Fullan, M. (1994). Change forces: Probing the depths of educational reform. Bristol, PA: Falmer Press.

Fullan, M. (1996). Turning systemic thinking on its head. Phi Delta Kappan, 77 (6), 420-423.

Goodlad, J. I. (1994). Educational renewal: Better teachers, better schools. San Francisco, CA: Jossey-Bass Publishers.

Hall, G., & Hord, S. (1986). Change in schools: Facilitating the process. Albany, NY: SUNY Press.

McGowan, T. (1990). Reflections of an experienced collaborator. In H. Schwartz (Ed.), Collaboration: Building common agenda, Washington, DC: Clearinghouse on Teacher Education and American Association of Colleges for Teacher Education.

National Association of State Directors of Special Education. (1995). NASDSE's vision for balanced accountability. Alexandria, VA: Author.

National Commission on Teaching and America's Future. (1996). What matters most: Teaching for America's future. New York: Author.

Quinn, R. E. (1996). Deep change: Discovering the leader within. San Francisco, CA: Jossey-Bass Publishers.

Rude, H. A. (1998). Structures which support changing processes and outcomes in teacher education: What we are learning at the University of Northern Colorado. In M. E. Diez (Ed.), Changing the practice of teacher education: Standards and assessment as a lever for change. Milwaukee, WI: Alverno College Press.

Schon, D. (1987). Educating the reflective practitioner. San Francisco, CA: Jossey-Bass Publishers.

Senge, P. (1990). The fifth discipline: The art and practice of the learning organization. New York: Doubleday Publishers.

Sparks, D. (1997, December). Standards-based, results-driven professional development. Paper presented at the Regional Conference on Educating All America's Schools, Washington, DC.

Teitel, L. (1996). Standards literature review. Washington, DC: National Council for the Accreditation of Teacher Education.

Laurence Armand French, Ph.D.s
Richard Francis Rodriguez, Ph.D..
Western New Mexico University
Silver City, New Mexico

PROJECT BESTT: A TRAINING MODEL FOR RURAL, MULTICULTURAL, BILINGUAL SPECIAL EDUCATION

Introduction:

Two recent federal actions, the Americans with Disabilities Act of 1990 (ADA, 1990) and passage of the North American Trade Agreement in 1993 (NAFTA, 1993), added a new dimension to special education in border areas. This situation poses new challenges especially among multicultural, bilingual rural populations such as exist along the Mexican/U.S. border and between the Quebec, Canada/U.S. border. Our training model is designed for special education/bilingual teachers working with these diverse student populations. The authors, between them, have experience with both border situations as well as a third dimension of this phenomenon -- that which exits between the larger dominant society and American Indian populations residing on rural reservations (Indian country). Project BESTT (Bilingual/ESL Special Education Teacher Training Project), a U.S. Department of Education funded training grant, is designed to provide a model for multicultural, bilingual special education within isolated rural areas. The purpose of our paper is to share the process of developing and implementing similar programs through the U.S. and in Indian country.

The Genesis of Project BESTT:

Essentially, Project BESTT emerged from the authors' collective experience with working with bilingual, culturally different populations. French, of French-Canadian descent, was involved in the bilingual, tri-cultural situation that exists along the northern New England/Quebec, Canada border. Here, distinctions are made between Anglo-Americans (Yankees), Franco-Americans (French-Canadians socialized within unique ethnic communities in the U.S.) and the French-Canadians of Quebec. Like their Hispanic counterparts in the southwest, French-Canadian/Franco-Americans have a language, culture, and social service delivery and educational system which departs markedly from that of the dominant U.S. society. Moreover, New England, and its Canadian neighbors, house American Indian Reservations (called *Reserves* in Canada). In this regard, our project shares elements with the one developed by Stanley Freeman, Jr. and Raymond Pelletier, at the University of Maine-Orono, for their Franco-American studies program which was funded through a National Endowment for the Humanities Grant (ES-3109-78-1272). Here, works by French- Canadians in the area of history, culture, literature, health, education and social issues are provided as a major component of the study of French-Canadian/Franco-American cultural diversity within both Canada and the U.S. (French, 1981).

French also has over twenty-five years experience working with mental health and educational issues within Indian country, notably with the Qualla Cherokees, Plains Sioux and Athapaskans (Navajo and Apache). Again, the issue of bilingual, multiculturalism exists with sensitivity required to discern between *traditional, assimilated,* and *marginal* Indians. Without an understanding of the polar opposites of the epistemological value systems of the aboriginal *Harmony Ethos* and the dominant society's Protestant Ethic, well meaning educators and health professionals are likely to exercise *ethnocentrism* in their clinical judgment. These three groups fall at different positions on the Harmony Ethos/Protestant Ethic continuum with the traditional Indians most likely to subscribe to the Harmony Ethos and the assimilated Indians being socialized within the dictates of the Protestant Ethic. Marginal Indians are those whose enculturation is such that they belong fully to either epistemological perspectives, thereby suffering most from psychocultural ambiguity (French, 1994; 1997; French & Hornbuckle, 1981).

Dr. Rodriguez was born and raised in the southwestern portion of New Mexico (Deming) which borders with Chihuahua, Mexico. Deming is the closest town (30 miles) of size between New Mexico and Palomas, Mexico -- the major border crossing. He is bilingual and his speciality area is special education. Dr.s Rodriguez and French, along with Dr. Virginia V. Sanchez, initiated *The Hands-Across-the-Border* project in January, 1990 which forged an international educational effort between U.S. teachers/student teachers and the teachers of the Mexican schools in Los Palomas. It was during this endeavor that we realized that the rural southwestern U.S. (west of El Paso, Texas and east of Tucson, Arizona) really had a bilingual, *tri-cultural* flavor -- something many local teachers and college faculty were unaware of -- even the Hispanic (Mexican-American) teachers and faculty who have lived along the border all their life. Hence, a major foundation of Project BESTT is that cultural sensitivity is a critical prerequisite for those being trained under our grant. Without this foundation addressing special needs we may very well unwittingly reflect ethnocentrism and a self-fulfilling prophecy whereby we unintentionally hurt those special need students we are mandated to assist under the Americans with Disabilities Act of 1990. The *Larry P. vs. Riles* (1972; 1974; 1979; 1984) controversy with the California schools relevant to Public Law 94-142 clearly illustrates a well meaning effort being sabotaged by ethnocentrism. Hence, cultural sensitivity, from a realistic perspective, is critical for a project such as this to succeed. Clearly, a realistic perspective of the cultures under study involves a comprehensive review of those cultures including ethnomethodological and ethnological experiences, especially by those directing the rural, multicultural, bilingual special education project.

Project BESTT's multicultural perspective:

New Mexico is an ideal classroom for multicultural studies. The state has the highest proportion of Hispanics (Mexican-Americans) in the U.S. (39%) and a rich and extensive history. New Mexico also has a substantial American Indian population with 19 Pueblos, 2 Apache Reservations and three components of the Navajo Nation -- the largest American Indian group residing on the biggest reservation in the United States.

American Indians comprise 9 percent of the state's population. This does not include the Mestizo, or Mexican/Indian mix which accounts for a large proportion of Mexican-Americans, especially those residing in the southwestern portion of the state where Project BESTT is administered. A high proportion of the Mexicans residing along the U.S. border, in what is termed, the *frontier,* are also Mesitzos. This proportion of American Indians in New Mexico also does not account for the thousands of Arizona Navajo who frequent the border town of Gallup and Farmington as well as the schools in the northwestern portion of New Mexico. Another unique characteristic of New Mexico's minority cultural groups is their stability. Both the Hispanics (Mexican-Americans) and American Indian groups had a long history predating U.S. Anglo-American and African-American involvement in this region. This stability has contributed to the maintenance of cultural traditions (Bailey & Bailey, 1986; French, 1994; Moses & Wilson, 1993; Sotomayor, 1991).

The Hispanic cultural influence extends back to the 1500s with the Spanish/Catholic influence. The interactions between the Spanish and the indigenous Native Americans and the resulting reciprocal sharing of cultural ways led to a distinctive *Mexican* culture. Today, despite a free and open border between New Mexico and Chihuahua, the Mexican and Mexican-American populations are sufficiently different as to warrant separate cultural entities. Thus, along the border we have a bilingual, tri-cultural situation. Further north, along the eastern Arizona and western New Mexico border, we have Hispanics (Mexican-Americans), Pueblo Indians, Navajo and Apache Indians in addition to the local *Anglos* (non-Hispanic Caucasians) presenting multiple languages and cultures -- factors that need to be addressed within any viable multicultural, bilingual, special education program. In the clinical realm, many of the aboriginal folk Indian ways were adopted by the Spanish and Mexicans and are still widely used by all southwestern groups. These are known as the Mestizo's ways within the Mexican/Mexican-American groups. The herbal healing and spiritual rites of the Mestizo's Ways are performed by a *Cuanderismo* -- an Indian, or mixed Indian/Hispanic healer, using a mix of traditional American Indian and early Mexican folk cures. An understanding of the Mestizo's Ways provides insight into the unique epistemological epistemology shared by border Mexican/Mexican-Americans and southwestern American Indians (French, 1997).

Project BESTT was designed to address the multicultural, bilingual (Spanish/English) special educational needs of an isolated rural border region of the southwest. Rural New Mexican schools, like their counterparts in Arizona, California, and Texas, have to deal with basically three cultural groups: Hispanics (Mexican-Americans), Anglo-Americans, and Mexicans, notably Mexican students. Many of the Mexican children and youth attending U.S. schools were born in the U.S. given that the closest hospital in the region is located in Deming, a thirty mile trip from the Mexican border and the town of Palomas. Thus, while these Mexican students and their parents reside in Mexico, the students hold dual citizenship and come across the border to attend U.S. schools, notably Columbus Elementary, Sun Shine Elementary School, and Deming High School -- all within the New Mexico Deming School District. The Hispanic (Mexican-American) population is comprised of about fifty percent of the

U.S. population within this region. The rural nature of this region adds to this challenge in that there are fewer resources than are found in the more populated areas. Another dimension is the bilingual/tri-cultural nature of the special education challenge. Marked differences exist, not only between the Anglo-American (*cowboy*) and Hispanic (Mexican-American) U.S. cultures but between the Mexican-American and Mexican cultures as well. This is a special consideration of our curriculum design.

The Project BESTT Model:

Project BESTT was designed to implement an innovative approach to personnel preparation in the emerging field of bilingual special education. The State of New Mexico recently adopted a non-categorical training endorsement. Project BESTT is designed to expand a bilingual/ESL version of this newly approved endorsement for the moderate needs teacher.

There is a critical need in the U.S. for bilingual special education personnel and programs. There are very few public school professionals with the unique crossover training necessary. Few, if any, school districts have an integrated or coordinated bilingual/special education program. For this reason, it is difficult, if not impossible, for most public school districts to adequately provide for the identification and instruction of Culturally and Linguistically Diverse Exceptional (CLDE) children.

As school districts have increasing numbers of highly qualified, tenured personnel, specialized training must occur among existing school district personnel in order to have the greatest service impact on the needs of CLDE children. Many of the school personnel working with the CLDE children have only provisional endorsements or are not fully endorsed in special or bilingual education. Therefore, this project provides graduate-level training leading to a M.A. degree in bilingual special education to school district personnel, as well as new incoming students.

Trainees are comprised of 30 special education, regular and bilingual education personnel primarily from minority backgrounds who are working toward the Master's degree in bilingual special education. Training occurs on campus at Western New Mexico University.

The ultimate goal of the project is to develop, refine, and disseminate a preservice Master's degree program in bilingual special education. The intermediate goal is to provide school districts in the service area with a quality trained cadre of bilingual special education personnel who will be able to provide adequate and appropriate services to meet the unique cross-cultural, special, and bilingual/special education needs of CLDE students. The immediate goal of the project is to implement and expand an innovative Master's degree program for bilingual, and regular education personnel, and interested parents. The special education training to be provided through this project has been accredited and approved by both NCA and the New Mexico Department of Education.

This project has identified special needs which are being addressed during a three-year funding cycle. These needs are directly related to the development of a non-traditional preparation program specific to multicultural/bilingual exceptional children. Project BESTT focuses on identifying the teacher competencies necessary to provide appropriate educational experiences for these children and provides the specialized training required to meet these needs. Although there was some preliminary planning in respect to developing and establishing this unique training program, including identifying the teacher competencies necessary for multicultural/bilingual exceptional children and designing the teacher training curriculum, the actual implementation required additional resources which were not available to the Special Education Discipline at Western New Mexico University. These needs included the following:

1. Need to develop/implement materials to support instruction;
2. Need to recruit qualified students for the program who are bilingual and who wish training in bilingual special education;
3. Need to implement the training program specific to culturally and linguistically diverse exceptional children;
4. Need to evaluate the training program; and
5. Need to disseminate the program.

Much work went into meeting the above-stated needs. Instructional materials needed to support classroom instruction were selected based on current research in the field of bilingual special education and multicultural education. Contacts were made with other IHEs in the state and region to ascertain those instructional materials which have a proven effectiveness for Master's degrees in bilingual special education teacher preparation programs. Recruitment involved working with the school districts closest to the rural U.S. (New Mexico)/Mexico (Chihuahua) border. The school districts affected by Project BESTT (Deming, Silver City, Cobre and Lordsburg) are in dire need of teachers trained in bilingual special education. Consequently, graduates from this program will fulfill an immediate need in their respective districts. Furthermore, the districts involved will provide pay incentives for project participants upon completion of their degree. This incentive will help assure that teachers remain in their respective district (Atkinson, 1993; Axelson, 1993; Baca, 1984; Bender, 1998; Brehm & Kassin, 1993; Grossman, 1995; Lee, 1995; Moghaddam, et al, 1993; Pincus & Ehrlich, 1994; Schultz, 1996; Smith, 1998; Sotomayor, 1991; Vargas & Koss-Chioino, 1992).

The program is designed to ensure graduates the necessary competencies needed to work with CLDE children in the following fashion: First, program graduates are gaining skills in bilingual education and special education from a cultural centric perspective. Strategies for teaching the bilingual child with handicapping condition from the cultural and rural perspectives is a major emphasis of Project BESTT. Secondly, the program is designed to provide an array of practicum experience for trainees. Given that all trainees are classroom teachers, learned skills are being applied in the field throughout the teachers' program of study. The most current research in these fields of training are being employed. This process ensures that graduates through the Project BESTT M.A. degree program will be among the finest trained bilingual special education teachers in the region, if not the U.S.

Project BESTT has an advisory committee which provides direction, advice and guidance to the project. Four out of five members have Ph.D.s in Education while the fifth member has a M.A. in Counseling Education and is the parent of a minority, severely handicapped child (Profound Mental Retardation). An objective, pre and post quasi-experimental, design using both an experimental (Project BESTT students) group and a control (teachers within the school districts who are not enrolled in Project BESTT) group, is being implemented with the pre-test already administered to both the experimental and control groups. The post-test will be administered following the completion of Project BESTT.

References:

Atkinson, D.R., Morten, G., & Sue, D.W. (1993). *Counseling American Minorities (Fourth Edition).* Madison, WI: WCB Brown & Benchmark.

Axelson, J.A. (1993). *Counseling and Development in a Multicultural Society.* Belmont, CA: Brooks/Cole.

Baca, L. (1984). *The Bilingual Special Education Interface.* St. Louis, MO: Times Mirror/Mosby College.

Bailey, G., & Bailey, R.G. (1986). *A History of the Navajo.* Sante Fe, NM: School of American Research Press.

Bender, W.N. (1998). *Learning Disabilities (Third Edition).* Boston, MA: Allyn & Bacon.

Brehm, S.S., & Kassin, S.M. (1993). *Social Psychology.* Boston, MA: Houghton Mifflin Company.

French, L.A., & Hornbuckle, C.J. (1981). *Cherokee Perspective.* Boone, NC: Appalachian Consortium Press.

French, L.A. (1981) The Franco American Working Class Family (Cpt. 14), *Ethnic Families in America* (Mindel & Habenstein, Ed.s). New York, NY: Elsevier.

French, L.A. (1994). *The Winds of Injustice.* New York, NY: Garland.

French, L.A. (1997). *Counseling American Indians.* Lanham, MD: University Press of America.

Grossman, H. (1995) *Special Education in a Diverse Society.* Boston, MA: Allyn & Bacon.

Larry P. vs Riles. 1972 343 F Supp 1306 (N.D. Cal.) Preliminary Injunction.

Larry P. vs Riles. 1974 (Affirmed) 502 F ed 963 (9th Cir.).

Larry P. vs Riles. 1979 (Opinion issued) No C-71-2270 REP (N.D. Cal. Oct 16 1979).

Larry P. vs Riles. 1984 no 80-4027 (9th Cir. Jan 23 1984).

Lee, C.L. (1995). *Counseling for Diversity.* Boston, MA: Allyn & Bacon.

Moghaddam, F.M., Taylor, D.M., & Wright, S.C. (1993). *Social Psychology in Cross-Cultural Perspective.* New York, NY: W.H. Freeman & Company.

Moses, L.G., & Wilson, R. (1993). *Indian Lives.* Albuquerque, NM: University of New Mexico Press.

Pincus, F.L., & Ehrlich, H.J. (1994). *Race and Ethnic Conflict.* Boulder, CO: Westview Press.

Schultz, F. (1996). *Multicultural Education 96/97.* Guilford, CT: Dushkin Publishing Group.

Smith, C.R. (1998). *Learning Disabilities (Fourth Edition).* Boston, MA: Allyn & Bacon.

Sotomayor, M. (1991). *Empowering Hispanic Families: A Critical Issue for the '90s.* Milwaukee WI: Family Service America.

Vargas, L.A., Koss-Chioino, J.D. (1992). *Working with Culture.* San Francisco, CA: Jossey-Bass Publishers.

TECHNIQUES FOR DEVELOPING A SYLLABUS/WEBSITE FOR A COMPUTER MEDIATED LEARNING (CML) COURSE

Kay Sather Bull
Sarah Kimball
Susan Stansberry
Oklahoma State University

INTRODUCTION

Many institutions of higher education find the CML courses especially appealing to that growing student body component - the off campus nontraditional student who may work full time and live some distance from campus. CML courses can overcome the temporal and spacial obstacles of isolated commuter students with busy schedules. Advances in computer hardware, software, and Internet access have provided educators with a plethora of computerized resources to augment their regular classes or create courses that are totally computerized.

Whether it is used for an online course or for an added component to an on-campus course, a good course syllabus will well serve both the instructor and students in defining and completing a CML course. A CML syllabus will contain information concerning the materials, directions, practices, and procedures students will need to perform all of the activities required for the course. It provides teachers an opportunity to personalize the course content by stating beliefs about teaching roles, the purpose of education, and the role that students play in learning. The syllabus conveys the teacher's desire to help the students so that the course goals are attainable.

In this paper, a variety of activities are listed which should function as idea stimulators when designing syllabi. We have listed things that the instructor might integrate intothe program as well as student activities.

COMPONENTS OF A COMPUTER MEDIATED LEARNING (CML) SYLLABUS

Generally, a syllabus includes a course and instructor description, why the course should be taken (often a recruiting tool), the components and objectives of the course, the changes which are expected in the student, prerequisites, any assumptions made about the students, and advice for success for all learners. The syllabus relates the course to other courses in the sequence and to the goals of the department and the university and conveys the intellectual challenge of the course (Harris, 1993), and the teacher's enthusiasm for the subject. A CML syllabus should contain all of the required components of the regular syllabus, which may be included in a list distributed annually by the administration. Listed below are the regular components of a typical syllabus and some of the possible components of a CML Syllabus which are either unique to CML or which need to be modified for use in CML.

Course Advertising: When the syllabus functions as a Web page for a course, it should begin with a segment which advertises the course. See for example http://www.nyu.edu/classes/garbage/. This information should be provided at the top of the syllabus so that it will be easily accessible to search engines which may only pick up the first 100-200 characters on a page. To draw students from other locations, include information about how to access the course, its tuition, start date, and other necessary details. The syllabus should contain links to appropriate sites so interested students can find course information. It is necessary to indicate what the minimum hardware requirements for accessing and participating in the online course will be and which, if any, downloadable viewers will be needed on the students' computer.

How to Use This Syllabus: After the advertising, provide directions on how to use the syllabus. See for example http:www.quasar.ualberta.ca/nethowto/. Indicate the most important points and insure that the student is cued to read or experience these points. For example, make it clear to the students what information is contained in each section of the syllabus, the importance of the course schedule page for assignment due dates and the discussion group requirements for participation in class discussion.

Table of Contents: Provide a table of contents if your syllabus has many pages or page groupings (8 or more). For an example of a main index see http://www.cryst.bbk.ac.uk/PPS/index.html. For a large syllabus start with a flow or block diagram of the components. For example see http://128.172.170.24/gj/201/201.html. This will allow the use of the fewest number of levels when you link pages together.

Course Map: The course map is an alternative to a table of contents.Sometimes it may represent a building with a variety of locations, for example see (http://itrc.uwaterloo.ca/~engl210e/). Usually a course map is graphical rather than outlined text which is beneficial for some visually oriented learners. See for example http://www.cl.uh.edu/INST5931/. It may, in fact, be useful to provide both a course map and a table of contents and let the students select which one they want to use. For those who are unsure about this try putting a counter on the table of contents and the site map and see if they both get use.

Contact and Address Information: Students should be able to communicate with the instructor after

---

[*] An expanded copy of this paper and its presentation are available at http://home.okstate.edu/conference.

class. Instructors should provide an email address, phone number, office address, home phone number, home address, home email for them. Other information may include synchronous and/or asynchronous office hours and details, i.e. email only, chat room, phone or in person, or some combination of the above, and how often the instructor will logon. Be explicit here so that the students will know how long they will have to wait before being answered and what the maximum lag time may be. List days (Saturday and/or Sunday) when email will not be checked so they will know when to expect a response.

Text materials: List materials the student is responsible for acquiring; books, readings, supplies, and the like. Provide full bibliographic information with the locations at which they can be acquired. This is particularly important when learners are at a distance. If the teacher holds copyright articles can be directly posted to the Web. For example see the Internet Public Library http://www.ipl.org/. If copyright is not held, password protect the articles and post them to the Web under the educational fair use provision of the copyright law of 1976. In Web assisted and/or enhanced courses, the student needs to know which parts of the course must be accessed using the computer and any alternative ways in which materials can be acquired, e.g., in a text library.

Examinations: If examinations are put on line, there are programs which will randomly present multiple choice items, with a different set for each student, and score the student responses to the items. Other programs will reorder the response choices while leaving the stems the same. See http://www.unc.edu/courses /ssp/tips/testing.html for tips on online testing. If teachers follow control methodology how will they insure security for the item sets? This is a question that should be answered. Some instructors use diagnostic examinations as part of a computer aided assessment process where the computer controls the difficulty level of the assessment using a hierarchical difficult item set to stretch the student cognitively and to assess the point at which the student will fail. The purpose of this kind of assessment is to use the diagnosis testing to route the student around material that the student knows and thereby providing appropriate levels of challenge and difficulty. For sample online questions see http://www.uwsp.edu/ acad/educ/wilson/exams/703exam.htm.

Grading Procedures: The grading procedures should be spelled out following university regulations. The requirements for each grade level (A, B, C) need to be clear and defensible. How are they calculated? What is the policy on "I's" and "W's"? What is the last date at which a progress report is due to the students? (Follow university regulations.) Grading criteria for papers and projects, as well as examinations need to be spelled out. Any additional ways to make or lose points or credit needs to be discussed in writing. Information about the ways that grades have distributed will help students decide iftheclass is right for them. The grade distribution, more than anything else, indicates whether or not mid-range students can be successful. Posting the grade distributions from previous semesters can draw students to your class or it can keep enrollment numbers down, depending on the grading philosophy.

Disabled Students: There is usually a standard paragraph which must be inserted for disabled students that states, "If any member of this class feels that he/she has a disability and needs special accommodations of any nature whatsoever, the instructor will work with you and the Office of Student Disability Services (or other appropriate title) to provide reasonable accommodations to ensure that you have a fair opportunity to perform in this class. Please advise the instructor of such disability and the desired accommodations at some point before, during, or immediately after the first scheduled class period." Are there other provisions which will be provide for disabled students such as, low vision readers, text for audio, and so forth? These additional provisions should also be specified in the syllabus.

Encouraging Students to Use Technology: If the course is not fully Web based the instructor will want to get the students involved with the technology. There are a variety of activities that can be built into the syllabus which will encourage students to use technology. See for example http://sunsite.unc.edu/horizon/mono/ CD/Instructional_Technology/MacDonald.html. Methods include requiring the students to use email to submit papers and projects; using email to answer student questions, making comments on assignments made in email on email; requiring students to get their assignments on line; requiring students to find information on the internet; require students to post articles electronically; require presentations which use technology require student Web pages, and require the use of graphs and spreadsheets which are computer generated. Many exploration and uses activities are provided at http://www.unc.edu/courses/ssp/tips/introducing.html.

Chat Room: A chat room is a cyberspace location where people can present messages and receive responses. Chat rooms are synchronous vehicles which require that participants be on line at the same time. If students are to have real-time dialogue, or if the instructor wants to talk with students in real time, link the syllabus or home page to a chat function. A chat room will need to be set up by the instructor in advance, and students will need to be instructed concerning chat etiquette.

Email: Many will want to make the assumption that all students know how to communicate using email. In ten years this may be a valid assumption, but it is not today. The teacher should provide a link to the email system which students should use and a manual so that they can get up and running. The reason that the teacher should provide the email, or at least specify which system to use, relates to the way in which the various systems transfer files. If the systems are just slightly incompatible, and this is likely, then it may not be possible to transfer files or messages between learners.

Procedures for Use: In relation to collaboration or to computer usage, the teacher may want students to logon and get their assignments on time, you may also want them to submit their answers to the assignments electronically using forms or email. To encourage this, teachers may want to post a message a day so that students will check in to read the message and will be online so that they will, in all probability, also read other questions and responses collaboratively.

Student Roster and Communication: To enhance student communication among each other, provide a student roster with students' email addresses and other contact information the students themselves provide. From this list the teacher can produce a listserv for sending broadcast messages to the whole class when appropriate. For collaborative courses, the student address list is essential for students to share their work, comments, questions, and so forth with others. Most collaborative projects will require whole class or team interaction as well as one-on-one interaction. Listservs and email for private messages can accomplish this very well. Teachers may also wish to have a chat room or other synchronous interaction space to allow students to interact in real time.

Tutorials: Tutorials are usually scheduled by the instructor. Here the instructor will work with one or more (usually several) students in a synchronous mode to present information, ask questions, and provide answers to student questions. The general purpose is to insure that all of the students have been exposed to particular content that the instructor thinks is important. Tutorials may be programs which teach or practice the student in working with or using a specific concept or process. There are many tutorials on the Web for many areas. For example physics (semiconductor manufacturing at http://www.fullman.com/semiconductors/), mathematics (graph theory at http://www.utm.edu:80/departments/math/graph/), and biological science (The Interactive Frog at http://curry.edschool.Virginia.EDU/go/frog/ or The Virtual Fly Lab at http://vflylab.calstatela.edu/edesktop/VirtApps/VflyLab/IntroVflyLab.html).

Idea Sharing: An idea sharing segment of a syllabus may be a listserv, chat room, bulletin board, virtual reality, or other cyberspace where information can be posted or where individuals can interact. Idea sharing can be done by the instructor, by individual students, or by all of the students at different times. Ideas are presented which relate to the material that the students are studying or exploring, or ideas for new explorations can be presented. Students can publish original documents for peer critique, comment, or edification. Information related to projects can be shared or disseminated depending on the source. (See list of listservs at http:www.lsoft.com/lists/listref.html

More Syllabus Components: An expanded description of more syllabus components is available at (http://home.okstate.edu/conference) under the following headings: expectations (instructor), exams and major assignments (see web exploration assignment http://www.msu.edu/user/coddejos/horizon/mono/higher_ed/edited/codde.html), list of key concepts (see Netspeak at http://sunsite.unc. edu/horizon/mono/CD/Internet_Glossaries/lingo.html or a hyperglossary at http://www.cryst.bbk.ac.uk/PPS2/ glossary/index.html), model papers/project (see the Germ at http://jefferson.village.virginia.edu/courses/ennc986/germ.html), course objectives and outline, your name, office hours and bio, research teams, solicit subjects, collect data, requests for participation in research teams, research publications, portfolios, help desk, lab safety/health policy, policy on attendance, fees in addition to tuition, other requirements (see http://www.tgsa. com/require.html for hardware and soft ware requirements), statement to cover possible changes in the syllabus, statement of academic integrity, due dates, university policies, course cafe, style/mode of teaching, prequisite and support courses, add/drop policy, and course number and title.

SYLLABUS LINKS

Hypertext links provide access to other Web sites. The use of links builds the syllabus into a resource which students will use throughout the course and beyond. The following variety of topics to which a syllabus could be linked is not an exhaustive list. Others may relate specifically to the discipline. Motives for creating links include facilitating browsing or navigation, providing access to issues, papers, tutorials, and other activities. Links may provide support for a particular viewpoint, validate opinions and feelings, and entertain by leading the students to curiosity-provoking information or to fun activities. Links may also be used to respond to an issue, pose a question to an issue, provide support in both the cognitive and affective domains, start a controversy, develop generalizations or discriminations, show objects, and refer to similar opinions. Remember to provide the URLs in the links section so that students can copy them for use after the syllabus is no longer available.

Web Resources: There are a great many resource Web sites (see examples http://www.unc.edu/courses/jomc050/useful.htm or http://www.oclc.org/oclc/menu/home1.html). A Web resources page allows the instructor and/or students to post resources which may be scanned before posting. Web materials are not reviewed and students therefore must learn how to self-evaluate any materials that they download. The teacher might want to share these questions (and others appropriate for your discipline) with students: Can you identify the author? Is the author affiliated with an institution of higher education? Has the author published other information on similar topics in refereed journals? Is the material in an on line journal? Does the on line journal have an editorial board that reviews articles before publication? Material from the Web is likely to seem the most relevant, most immediate, most accessible to students, and the most up to date. The importance and relevance of Web resources varies widely with students and disciplines (for resources in higher education see http://contract.kent.edu/change/articles/ julaug95.html). To use time and Web resources wisely, a descriptive or rating system can be developed and used to rank resources.

Homework: Posting homework problems forces students to get on the computer. Also, the teacher can post answers to the homework after the due date has past for students to check their answers. Electronic homework submission allows students immediate access the correct answers and immediate feedback. Homework help is also available (see http://www.unc.edu/courses/jomc050/homework.html).

Home Page Links: Home page links might include the instructor's homepage, the departmental homepage, the college homepage, and the university homepage (see for example http://www.cee.umn.edu/dis/courses/MICE5309_5000_01.www/). Links to the library catalogue allow students to go directly from the syllabus to the library for needed references and/or materials. Links to class members' homepages allows students information about the interests and background of their classmates. Student home pages are particularly important in setting up collaborative team projects. Students feel more comfortable when they know something about the people with whom they are working.

Collections of Solved Problems: If students are asked to solve problems teachers should provide them with solved problems with the work shown. In mathematics and in other problem based disciplines providing copies of solved problems is effective in improving student learning.

Tying Links to Text: If you provide text for students to read on the Web, you may want to embed some links in the text. See for example http://www.stg.brown.edu/projects/hypertext/landow/victorian/victov.html. Text links can provide a glossary of new vocabulary words and enrichment material for in depth investigations (see for example http://www.icbl.hw.ac.uk/ctl/mayes/paper1.html).

Hypertext Possibilities: A hypertext environment facilitates student learning. See for example http://projects.iat.unc.edu/blake/. A definitions link provides a glossary or a dictionary for new terms. Students are more likely to use a link for an unknown term rather than to seek meaning in context or look it up. A graphic link enhances the student's understanding by providing a visual image e.g., a microscope slide of a ______(you fill in the blank). The instructor may wish to show drawings, photos, pictures, paintings, or graphs. Other graphic links include animations which show processes, morphs (pictures that are animated to change, e.g., as a person ages over time), movies or audio examples which are only meaningful if seen or heard, and Web sites which have in depth information for projects or reports. Finally, we may want to link to maps can be used to display a wide variety of relational information. Client side maps are created by individuals, not controlled through a server. Server side maps are located on a server and are remotely accessed. You may also provide image maps with clickable hot spots (where you can click on the map to get more detail or information). Optional filters on maps decrease the amount of information and fish eyes allow learners to zoom in. All of these features may be useful in certain disciplines.

Archives: Archives are developed to share student work, to improve teaching and to provide a resource for future classes. Some archives include, for education http://www.coe.uh.edu/archive/beginning.html, for history http://www.lib.byu.edu/~rdh/eurodocs/, for Greek mythology http://home5.swipnet.se/~w-58907/GGGM-F/GGGM-central.html, and poetry http://sunsite.unc.edu/ipa/. Some instructors have their students post papers and projects to a class Web site so that they can be examined and shared with other members of the class. This lets the students see what the competition is doing and allows them to compare their products to the products of others. This, in turn, increases the general level of student products. In some classes, students are asked to develop a method of teaching any material that they mastered, but which they found difficult. These teaching materials are used for students who are slower or for future classes to help them go faster and farther in the material. Finally, archives can be used as a resource for future classes. Students can link to older papers and summarize them and build upon them to integrate new information. This is particularly useful in areas where the discipline is developing rapidly.

Demonstrations: In many courses there are demonstrations which are presented to the students. These can be in psychology (see Pavlovian conditioning at http://www.users.csbsju.edu/~tcreed/wcb/pavdemo.html), physics, biology, zoology and in many other areas. Teachers may wish to create demonstrations using animations, video, or they may be found already created on the Internet. Teachers can then provide links to the demonstrations either within the syllabus or to external resources.

How to Take Notes on Electronic Materials: Teachers should ask students to make a record of any questions that the material raises in their minds. Have these questions posted to a questions page which other students can answer for points. If any question is unanswered for more than two days the teacher should answer it. Teachers will find that peers will answer most of the questions. Students should provide personal examples of concepts which can be shared with other students. Student generated examples are more likely to be on the level of the students and therefore more appropriate than instructor generated examples. Teach students to bookmark important ideas to come back to later. This requires annotation of bookmarks, which can be done by pasting the URL into a word processor, using control c (to copy) and control v (to paste), and then typing in the annotation. Students should also keep a list of things to think about or review as they peruse electronic material.

Feedback Database: Some instructors want to collect frequent feedback from their students, especially when they are trying new procedures and material. An instructor can set up a feedback database where students can respond regularly to questions about the course content, projects, using the electronic medium, etc. Teachers may provide some small incentive to the students for providing feedback, such as bonus points. If the course is totally on line the teacher will want to insure that the students have an opportunity to evaluate it using the standard university form. Also, teachers will probably want to gather other evaluation information related to learning in an electronic format. A link to the syllabus and a date in the TO DO section of the time line will assist the students in remembering to fill out the evaluation form. If confidentially is needed the instructor can have the evaluations sent electronically to another office until grades have been posted. Explain thoroughly so the students will be honest in their evaluations.

Discipline Pages: A link to pages which define and exemplify the discipline is very useful. See geology example at (http://www.enmu.edu/~piercer/geol/welcome.htm).

More Syllabus Links: More syllabus link ideas are available at (http://home.okstate.edu/conference) under the following headings: Class notes, incomplete note forms, hypertext description, databases (see astronomy digital image library at http://wwwascusc.org/jcmc.vol2/issue3/), subject guide (http://www.cde.psu.edu/DE/IL/ART_122W/StudyGuidepreview.html or for Shakespeare http://shell.idt.net/~kcn/shakes~1.htm), self-assessment items (http://www.academyonline.com/academy /athens/latin/latin1.htm), diagrams, enrichment materials (humanities at http://www.dipoli.hut.fi/org/TechNet/ org/humanities/envi/index.html or at http:/ucmp.berkeley.edu/), writing assistance (http://www.wsu.edu:8080/ ~brians/errors/index.html), downloadable programs (http://campus.esri.com/campus/home/home.cfm). technical notes, computing resources, statistical resources, class news group (http://www.vianet.net.au/~timn/thesis /appd.html), student support services available (for careers see http://www.unc.edu/courses/jomc050/career.html), instructor's announcement page (What's New Page), frequently asked questions (FAQs), teaching, and tutors.

SYLLABUS DESIGN

Design Principles: Beginning a Course

First Activities: The first thing a teacher should do when beginning a CML course is to send the students a welcome message and congratulate them for getting on line and finding the Web site or Web syllabus. The second thing is to provide a collaborative activity where they can get their feet wet. The first distance assignment should draw on the student's own experiences and should not be technologically demanding. Such as a single task minisession which can be accomplished the first time they are on line. Usually this takes the form of filling out a questionnaire about themselves or constructing an autobiography that can be shared with other collaborators. This invites student responses, shares email addresses, encourages interaction and, if the teacher solicits it, can begin the development of comraderee. If students have homepages, request that they invite their classmates to visit them.

Net Etiquette: A brief session on net etiquette provides rules to play by (see http://www.cl.uh.edu/INST5931/Lesson4/less4.html). In a synchronous environment, the group can brainstorm to set rules they can all agree to. One rule is related to brevity- it is usually better to be brief than to be verbose. This is even more important in a CML environment than it is in a traditional classroom setting. Another is to summarize what is being responded to if a comment is being entered into a thread that has been going on for a while and where responses may not necessarily be in a strict logical sequence. Students may take a netiquette quiz at http://www.albion.com/netiquette/netiquiz.html.

Introducing Site Maps: If teachers are providing text in a hypertext environment they should provide suggestions as to where the learners should begin if there are many entry points (see http://edweb.sdsu.edu/webquest/Process/WebQuestDesignProcess.html). Also, provide alternative routes if the text is long and contains many links. Typically, it is helpful to provide an orientation strategy which will show the structure of the content and will assist the students in navigating it (see http://www.mandozine.com/map.html or http://www.well.com/user/polly/sitemap.htm). Teachers may want to show how various tracks through the content can be constructed to satisfy a variety of student generated objectives. If alternative tracks are provided these should be mapped and explicated.

Buddy Programs: A teacher starting a unit with new learners the teacher may want to pair up those who have some experience with the novice learners. The more experienced learner can help the novice trouble shoot problems, usually with the equipment or programs. This is a mentor/buddy program. A straight buddy program pairs together those who have no experience. With a mentor/buddy program they are encouraged to work side by side to learn. This way they quickly see that both have problems but that problems can be overcome.

Clarifying Expectations: Teachers should make participation expectations clear and model responsiveness. The expectations can be set either by the teacher or during a brainstorming session where the students talk about what must be done to set up an environment in which all can be optimally productive. In the electronic environment the teacher must specify the number of logons, and the number of posts that you expect from the students for a grade of "X".

Additional Syllabus Design Components: Additional syllabus design components under these headings are described at http://home.okstate.edu/conference: community building(learning communities on line at http://prism.prs.k12.nj.us/cgi-bin/hn-Oll/get/forms/Oll/1/3.html), and sharing student created materials.

ADDITIONAL SYLLABUS ACTIVITIES

In this section we will look at some of the things teachers may want students to do as part of their learning experiences as well as things that you as the instructor could do to support student learning (for example check up on the flu season at http://www.cdc.gov/). This listing is by no means exhaustive, but it is illustrative of what those in the field of CML are doing at the present time.

Student Activities

Keep Student Activity Records: An activities log can be used for a grade, part of a portfolio, or a reflective learning project. An activities log details what they did on line and where they explored. In some classes, students are asked to explore the Internet and look for particular kinds of information. Here an activities log may be a copy of the places that the student visited, as evidenced by his/her bookmarks. To facilitate this, teach students how to post information to threaded conferences.

Join an Internet List: There are a great number of discussion lists related to many disciplines. If yours is the first Web based course that students take, the teacher should familiarize them with many of the possible activities which can be conducted on the Web (see directions for Usenet at http://www.cs.indiana.edu/docproject/zen/zen-1.0_6.html#SEC31). This includes being on a list. It is generally good to teach them a little about the culture of lists before turning them loose. It is better to lurk on line and observe before posting so that posting is not done inappropriately.

Participate in a Chat Room: A teacher may develop a chat room for the class so that members can interact synchronously (see tips at http://www.siec.k12.in.us/~west/edu/chat.htm). There may also be chat rooms that individuals may wish to join, based on their interests within the discipline, which are available on the Internet (see http://www.jasonproject.org/front.html).

Virtual Environments, Participate in: In some disciplines there are ready made virtual environments to which students can link. These include a tour of diversity university MOO at http://www.december.com/john/teach/cmc/rpi94/mootour.txt and active worlds at http://www.activeworlds.com/. For directions for use see http://tecfa.unige.ch/edu-comp/WWW-VI/eduVR-page.html.

Conduct Web Searches: Teachers may want to have the students search the Internet and find information services or products which they would want them to examine (to find out how see http://www.unc.edu/courses/jomc050/search.html). There are many articles on the Internet which are peer reviewed and are prepublication copies of journal articles. There are papers from the proceedings of many conferences (sometimes before the conference takes place), and there are electronic journals in many fields. Teachers will want to teach students how to evaluate information found on the Internet is the author listed? What are the authors credentials? Will the author be held accountable for the information which he has posted to the Web? Is there a bias (political, commercial, religious, other)? Who is the information designed for? How current is the information, assuming it is dated? Undated information is probably not worth having in most cases. Are there references, or links to other sites which support the information presented?

Develop a Web Page: Web pages can be used to post class projects to an authentic audience, to introduce students to one another, list research interests of students hoping to participate in research teams, list student experience which others might look for it they were searching for diversity, etc. There are a variety of free and inexpensive programs which can be used to assist students in Web page development, or the institution may have such programs on its LAN (check with your computer center). Class Web pages can be used to introduce others to the things that are learned in a class. From this standpoint they can be used as recruiting tools. Teachers can have the students work together to set up a class tour of the content. Students can create materials which will help other students learn the content better and provide organizers which will help future learners better understand the content. Group products can be posted to a class Web page to show what the class has done and the class can list questions which still need answers. These questions can potentially guide the study of subsequent classes.

Work Through Simulations: In a number of areas in both the hard and soft sciences there are simulations which can be viewed, interacted with or participated in. See for example http://www/ascusc.org/jcmc/vol2/issue/. Teachers can provide these simulations for students by linking them to the syllabus. See for example http://medicus.marshall.edu/medicus.htm.

Instructor Activities

Promote Many-To-Many Learning Activities: Paulsen (1995) presents the concept of many-to-many learning where groups of learners work together. Teachers may want to initiate any of the following processes if you are trying to set up these collaborative processes: debates, games, role playing, case studies, discussion groups, brainstorming groups, delphi groups, nominal groups (for use in nominal group techniques), forums, focus groups, and simulations which are used to compress time or when situations are dangerous (http://www.hs.nki.no/~morten/cmcped.htm).

Develop Web Quests: Web quests are designed to help learners become familiar with the Internet and to help them find information that will be useful for projects (see description at http://www.cs.colorado.edu/~corrina /WebQuest/. Web quests start with the development of background information which establishes the need for the quest. A task is created which is doable, interesting, and specified in terms that are appropriate for the level of sophistication of the student(s). The search is begun by recording the information found and the anchors and links to other information that is related to the things found. The process should be clearly described, and the teacher should provide guidance in terms of directions and questions which focuses student activity. Time lines and concept maps may be developed, and there should be a conclusion to the task. Such as a report, paper, or other product which summarizes the information found. See WebQuests at http://www.firstmonday. dk/issues/issue5/perrone/index.html.

Develop Comfortable Learning Communities: Learning communities must be comfortable for learners. Develop psychologically secure environments (PSE's) which are collaborative environments which provide a secure family-supportive relationship structure. These environments will promote trust, make interaction more thoughtful , provide safety and support, and contain no inherent aversives for students. According to Papert (1993), the Web matches the ways in which students like to learn, and this makes comfortable learning communities possible. Groups which work together collaboratively develop a discourse history or collective intelligence to which all have input. As people interact in this kind of an environment, the group intelligence increases. To have a comfortable community learning environment you should be kind and gentle on the Web. Anything else reduces participation and, thereby, group intelligence about the project/concept/task under discussion.

Promote Reflection: Reflection is a process of thinking about one's thinking. Many students have never had this explained to them nor have they developed the idea on their own. But, to understand what went right or what went wrong and why, the student must think about it. Students should be taught to look at the ways in which they were thinking when they did things. This may start with think alouds where they (in a CML environment) write down what they were thinking about as they go through a process, like solving a problem. This think aloud should be detailed enough so that if there is a problem they can track all of the steps that they thought about and did as part of the process. In more complex settings they should try to think back on the critical incidents or the triggers that provided indicators that things were or were not working (see ThinkQuest as an example at http://library.advanced.org/11402). Peer interaction is helpful here. If several learners have had the same experience they can all provide what they think the critical points are and discuss the discrepancies. This will point out to the students who are not reflecting well or analyzing well what others look for that leads to success.

Develop time lines: Many students need time lines. Students procrastinate, and, if this happens in a CML environment, peers will be left without support. The instructor should teach students how to look at a project, learning experience, or report, and estimate how long it will take for each player to create and share his or her parts of the material. This estimate should take into account the regularity with which all of the collaborators can get on line and is dependent on when the critical building blocks are presented. The latter is the basis for PERT charting: who is going to do something that another person is dependent upon and when does it have to be done? Teachers should expect to have several brainstorming sessions on line with each group before they can do efficient time lines. It should be emphasized that collaborative CML projects almost always take longer than students estimate because of unforeseen delays on critical pieces of the project. In large projects teach them about "tickler" messages to remind others of approaching deadlines. Teachers should also inform the students that a lack of planning on the student's part does not constitute an emergency on the teacher's part.

Promote Annotations Teach students to annotate text material (see description at http://elmo.scu.edu.au/sponsored/ausweb/ausweb96/educn/rutherford/paper.html). In an electronic environment this can be done with hypertext links. Students can compile potential questions that might be asked on a test, or the answers to formative questions which have been embedded by the teacher. Students who go through the material later or more slowly have the advantage of reading the answers to previously asked questions. Advanced students or those who move quickly through the material should be taught to develop FAQ's for their classmates. This will help them and will keep the same question from being asked again and again. The FAQ's can be linked to the various question points in the text.

Study Guides: If questions are provided to guide study, the answers can be linked to them if they are text based. This will provide a study guide for all collaborators and will form the basis for scaffolding for students who do not understand the answers. Concomitant to this, teach the students that it is to their advantage to ask questions of their peers and of the teacher when they disagree or do not understand.

Teacher Annotations: Teachers also can provide annotations. A teacher may want to create an assignment tips section. If teachers have assignments, it is likely that students will have questions about them. As questions are received and answered share the questions and answers with all of the students though the use of an assignment tips section. This can be linked to the assignment or it can be a stand alone which the students are trained to look for in the syllabus or on your class Web site.

Develop Class Reference Collection: Teachers may want to create a class reference collection (see http:/www.inform.umd.edu/EdRes/Colleges/HONR/HONR218C/) or use an existing collection (see http://www.pantheon.org/mythica/). The class reference collection allows teachers or students to place their best work on line. This showcases good student projects. It can be used as a recruiting tool for students in future semesters where they can see the kinds of projects that are required by a particular class.

Other Additional Syllabus Activities: Other additional syllabus activities are listed at http://home.okstate.edu/conference under these headings: post text material, create job aids (see http://edweb.sdsu.edu/edweb_folder/EET/JobAids/sect1/whatrjobaids.html), keep an electronic journal, develop interpersonal exchanges, participate in a class Web conference, develop a book mark list, publish a Web site to teach others, develop (or explore, if one already exists)a current events page (see for example http://washington post.com/), appoint a group leader, thread boss, or mediator, encourage collaborative participation, establish learning circles, create special interest groups, develop problem solving projects, and assist in defining the problem.

SUMMARY

The CML syllabus as we have presented it contains, or can contain, all of the material necessary for a course of instruction. As the instructor you need only add students and your supervision/interaction. A teacher should not feel that all components which we have presented must be used in any one syllabus, but teachers will want to use some of them. The number of the CML components which are adopted will be dependent on how much interaction is desired with the students in a non-CML mode and how much control the teacher wishes to personally have over what the students do. If instructional materials and activities are built, the teacher will need to do little other than monitor student progress. Here most of the work will be on the front end when carefull design of materials are used to develop student behaviors or to elicit the processes which the students need to experience. If content is presented in an adjunct mode such as audio or video streaming, the teacher will be much more involved in the real time process and you will spend less time in the creation process at the beginning.

For the first semester or two teachers will want to work closely with the students because there are always bugs that need to be worked out. When the process is running smoothly the teacher can focus more exclusively on the development of the students knowing and skills.

Mary T. Davis, Ph.D., Maggie J. Emery, Ph.D., Cheryl Lane, M.S.
Clemson University, Clemson, South Carolina

SERVE TO LEARN: MAKING CONNECTIONS IN RURAL COMMUNITIES

The importance of field experiences in preservice teacher training has been emphasized by a number of researchers (Scruggs &Mastropieri, 1993). The Center of Excellence for Rural Special Education, at Clemson University, has developed an undergraduate program which is characterized by the extensive field-based nature of its preservice teacher training. The preservice teachers' senior year is a time of total immersion into the local school community. University classes are taught in local schools in the afternoon by special education faculty, while mornings are spent in special education classrooms. Preservice teachers are thereby provided the opportunity to immediately and directly apply in school classrooms knowledge gained during instruction. Formal instruction is given a "real world" (Evans, 1994) basis for application. Situation-specific problems found in real classrooms not only provide a basis for university class discussion, but also allow for a broadening of textbook examples. The program is based on the belief that instruction is more meaningful when placed in context and extended beyond the walls of the university (Guest, 1993).

Although this recontextualization of teacher training has taken place in rural counties surrounding Clemson University, some of the typical characteristics of a rural community, e.g., isolation, limited resources, sparsity of population, are offset by the influence of the university community. This prevents preservice teachers from experiencing not only the challenges of rural education but also the benefits of strong community ties and sense of context reported as present in rural schools (Stern, 1994). Further, over 90% of these preservice teachers obtain jobs in counties across the state which have a very different rural profile than the counties in which they are placed for their clinical experiences. The counties immediately surrounding Clemson University have the highest test scores and lowest at-risk factors in South Carolina. They also have the lowest percentage of minority populations (average 3% African-American and even lower among other minority groups) in the State. As a region, the Southern United States has the highest rural poverty rates in the nation and 95% of rural African-American children (U.S. Dept. of Commerce, Bureau of the Census, 1991). Most rural counties in South Carolina fit the characteristic profile of poverty, poor health care, and high at-risk factors for school failure. These are the counties where special education teachers are in most demand and the counties where graduates of Clemson's program are most likely to find a teaching job. The two factors of first, little connection to the community outside of the context of the school building and second, the discrepancy in profiles of schools in which training takes place and schools where teaching jobs will be found places limitations on the provision of a context for preservice teachers which is truly meaningful and relevant. Both of these limitations have been addressed by extending beyond the walls of the University to reach out to communities which are geographically remote from institutions of higher education.

During preservice teachers' senior year an opportunity is provided in the Fall and Spring semester to be matched with a mentor special education teacher for two weeks in a rural school district which more closely represents the type of community in which they are likely to find employment. The demographics of the county serving as a base for this experience strongly contrast with those of the counties surrounding the University. For example, 74% of the school age population is African-American compared with 3% in the typical clinical placement. This rural county also has high rates of failure on all standardized measures of school achievement, with 41.2% of children "not ready" for first grade and a failure rate of 53% on the exit exam from high school.

The focus of this preservice experience is to work with, and be a part of, the rural school's inextricable connection with the community. One way of facilitating this connection with the community is by working with local churches to identify host families for the preservice teachers. The distance of this county from campus precludes any commuting , therefore, during the time in the rural school district the preservice teachers stay in pairs in the homes of families within the community. This provides a social connection with the life of the community. This connection is further strengthened through the contributions of local businesses. These social/business ties help in the development of community awareness, a process which is integral to the planning and implementation of a service learning project. Through the implementation of a service learning project, preservice teachers identify community needs and analyze how these community needs can be used as the focus for a meaningful school curriculum.

Much of the impact of the school in rural communities is directly related to the strength of the school-community connection (Stern, 1994). Service learning provides a curriculum linkage and a teaching methodology that renews and strengthens the interaction between the classroom and the needs of the community and its members. Service learning is not a form of community volunteerism but a methodology that blends service and learning to achieve the academic outcomes as written in IEPs (Dunlap, Drew, Carter & Brandes, 1997). Figure 1 shows an example of a service learning academic outcomes plan which may be used to record the integration of service learning activities throughout the school curriculum.

Service learning projects have four stages; preparation, action, reflection, and celebration (Duckenfield & Wright, 1995). In the preparation stage, students identify and analyze community needs, select and plan the project, and receive instruction in academic skills necessary for successful project implementation. The Fall semester experience for the preservice teachers involves the facilitating of this phase of the project. Local businesses or agencies are targeted as sources for information or materials. In the action stage, students complete direct, indirect, and/or advocacy activities that are meaningful, community-based, and academic outcome oriented. In the reflection stage, students discuss, read, write, and think critically about their service experiences. In the celebration stage, students and the community jointly recognize the significance of the contributions of the service

SERVICE LEARNING: ACADEMIC OUTCOMES PLAN

Meeting Social/Welfare Needs
THEME

Hospital Cards
PROJECT

Language Arts	Social Studies	Science	Mathematics	Fine & Performing Arts	Other
1. The students will write one complete sentence using correct punctuation and structure. 2. The students will express feelings using one complete sentence. 3. The students will use a proofreading strategy to correct punctuation, spelling and structure. 4. The students will publish a book to be used in the hospital waiting room.	1. Class will study how different cultures and countries provide medical services. 2. The students will learn about health insurance and various issues facing the U.S. Congress. 3. The students will create a poster on the impact of the local hospital on the surrounding rural community.	1. The class will discuss various health problems and illnesses requiring hospitalization. 2. The students will explain what x-rays, blood work, and breathing machines are used for.	1. The students will use math to problem-solve and arrive at the number of cards needed each week by individual students.	1. The students will plan and give a presentation of the project to members of the PTO. 2. The students will design a bulletin board for the front office board.	**SOCIAL SKILLS** 1. The students will express feelings orally at least twice weekly during class. 2. The students will greet guests, introduce themselves and host a social affair. **CAREERS** 1. The student will name careers in hospitals. 2. The students will interview one hospital employee. 3. The students will write an article about a career in a hospital.

FIG. 1: INTEGRATING SERVICE LEARNING INTO THE IEP

learning projects through special media coverage, assemblies, certificates, and social events. During each of these stages, the goal of all the activities is to empower the schools and the community by connecting academic skill attainment with community experience and by addressing rural community needs with meaningful action. Figure 2 lists the service learning projects developed and implemented by the preservice teachers which address many of the challenges for providing quality education in this rural school district.

CHALLENGES OF RURAL COMMUNITY	SERVICE LEARNING PROJECTS
1. 27% parents without HS degree	1. GED single mom tutoring
2. 30% of families single working parent	2. Latchkey child safety program
3. Car accidents major cause of teenage mortality	3. Accident awareness program
4. 17% unemployment	4. Repair appliance business Recycling center Landscaping design business
5. 36% of families below poverty level	5. Soup kitchen Canned food drive
6. 36% of population over 65	6. Publishing oral stories
7. 41% dropout rate	7. School as an art center
8. 38% over 65 living below poverty level	8. Senior citizen mentoring
9. 41% not ready for 1st Grade	9. Early literacy project

FIG. 2: ADDRESSING THE CHALLENGES THROUGH SERVICE LEARNING

(Source: South Carolina Kids Count, 1996)

Service learning establishes a reciprocal relationship between the school the community (Cairn & Cairn, 1991). The preparation, action, reflection, and celebration of service learning projects connect the resources, the job development/economic needs, the social/welfare needs, the intergenerational ties, and the life-long learning opportunities of the school and the community as illustrated in Figure 3.

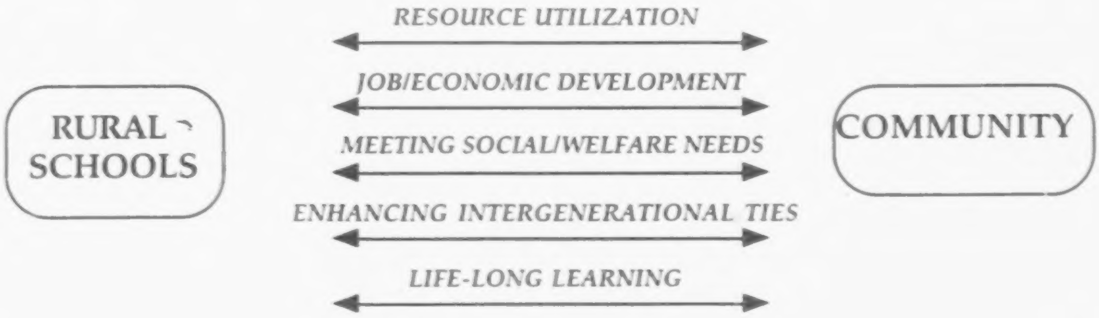


FIG. 3: SERVICE LEARNING: CONNECTIONS BETWEEN SCHOOL AND COMMUNITY

Service learning creates a learning environment where the rural community serves as a curriculum resource. During the preparation phase of a service learning project involving recycling, the students spent time researching the services in the community that would support various kinds of recycling. They made personal and written contact with local businesses in order to secure such resources as transportation, storage, and reclaiming services for paper and metal goods. During the action phase of a service learning project involving a mentoring project with retired citizens, the students interacted with various community agencies providing services to the elderly and developed information packets for their adopted grandparents. The students connected with businesses that give senior discounts and recreational facilities that cater to senior programs in an effort to link older citizens to health and well-being resources. Service learning projects allow the rural community to be viewed as a resource rich environment rather than an environment of diminished services.

Service learning provides an opportunity for rural schools to participate in job development. Secondary students, surveying established businesses, discovered a lack of appliance repair services in the community. Implementing a small appliance repair project led to the development of marketable technical skills. Through handling money, opening bank accounts, and dealing with timely delivery of services, students began to understand the logistics of operating a business. Addressing the need for community recreational services led to the landscaping of an abandoned property and construction of a playground. Students increased their knowledge of mathematics and science and their awareness of how development of new jobs would contribute to the economic well-being of a depressed employment market.

Service learning increases the integration of academic curriculum and community action in such a way that social and welfare needs of communities are addressed. During the reflection stage of a service learning project that implemented a soup kitchen at the school for needy citizens, students developed a sense of ownership for community poverty issues. Secondary students, focusing on meeting the needs of a large percentage of children who are home alone after school, presented a safety assembly program in elementary schools and established a buddy system for these latchkey children. Realizing that the major cause of death among teens was car accidents, middle schoolers advocated for changes in driving laws, for increased training in accident prevention, for safe driver recognition systems, and for safer intersection design and construction. During these projects, students began to answer these questions: What is my value in this community?; What would I change about my community if I were in charge?; and How are the issues of poverty and child welfare in our community impacted by what is going on at the State level? The act of reflection through journal writing and group brainstorming develops a sense of personal connectedness between youth and the social issues of their rural community.

Service learning projects challenge the adults in the community to connect with the reality of schooling as a life-long activity. During the celebration phase of a service learning project centered on students tutoring single mothers for the GED, the mothers reported feeling that they finally viewed the school as a safe, caring environment. Students researching local musicians and their contributions to various types of music developed music learning centers in the school library and invited these musicians to share at these centers. Connecting community members to the school as a center for life-long learning has the potential to raise the functional literacy level of the entire rural community.

Service learning establishes opportunities for enhancing intergenerational ties in a time when many rural communities are losing these links because of movement out of the community by youth. Students who transcribed oral stories from elderly adults and celebrated by inviting these adults to school to share in the translation of these oral traditions into preserved stories established a forum for intergenerational sharing. These students gained new perspectives of their cultural heritage and were motivated to improve their writing and reading skills so that they could connect themselves with this heritage. During the action phase of assisting the local Meals on Wheels delivery to elderly shut-ins, a group of middle school students discovered the needs of this population to be far greater than nutritional and expanded their project to include visitations, cards, and assistance with household maintenance. Service learning shortened the geographical distances of the rural community and diffused the sense of isolation by bringing the young and old together.

The preservice teachers at Clemson University modeled through the development and implementation of service learning projects in a rural community that caring for others and the community are characteristics of responsible adults. Providing training for preservice teachers within this unique rural context exemplified curriculum that was relevant, motivating and purposeful. Several studies of long term effects of school-community projects (O'Connell, 1983; Middleton, 1993) show that the adult life patterns of those who participated in service learning projects exhibit increased involvement in community activities and a greater sense of ownership for local issues. The immediate impact of this contextualized training has been captured in these reflections recorded by the preservice teachers; "I learned that to build a successful curriculum, teachers must focus on the needs of the area in which they are teaching." and "It's one thing to watch a movie about another culture, and it's another thing to experience this culture. Movies might lead to awareness but experience leads to understanding. In the rural setting, you need to bring the world to your students!".

REFERENCES

Cairn, R.W., & Cairn, S. (1991). Collaborators: Schools and communities working together for youth service. Roseville, MN: National Youth Leadership Council.

Duckenfield, M., & Wright, J. (eds.) (1995). Pocket guide to service learning. Clemson, SC: National Dropout Prevention Center.

Dunlap, N. C., Drew, S.F., Carter, K. G., & Brandes, B. D. (1997). Serving to learn: Integrating service learning into special needs curricula. Columbia, SC: South Carolina Dept. of Education.

Evans, C. (1994). Higher education: the albatross around the neck of our public school. Phi Delta Kappan, 75, (10), 745-751.

Guest, L. (1993). Improving teacher preparation: What the reform reports recommend. Report from The Agenda for Teacher Education in a Democracy . Denver, CO: Education Commission of the State.

Middleton, E.B. (1993). The psychological and social effects of community service tasks on adolescents. Unpublished doctoral dissertation, Purdue University, Indiana.

O'Connell, B.E. (1983). Long term effects of school-community service projects. Unpublished doctoral dissertation, SUNY, Buffalo.

Scruggs, T. E., & Mastropieri, M. A. (1993). The effects of prior field experience on student teacher competence. Teacher Education and Special Education, 16, (4), 303-308.

South Carolina Kids Count Data. (1996). Columbia, SC: SC Budget and Control Center.

Stern, J. D. (1994). The condition of education in rural schools (U.S. Dept. of Education Publication No. PIP 94-1106). Washington, DC: U.S. Government Printing Office.

U.S. Dept. of Commerce, Bureau of the Census. (1991). Poverty in the United States: 1990 (Current Population reports, Series p-60, No. 175). Washington, DC

John H. Hoover
Belle P. Aakhus
Bureau of Educational Services and Applied Research
The University of North Dakota
Grand Forks, North Dakota

STAYING, LEAVING, AND JOB SATISFACTION IN A RURAL/REMOTE STATE: A MATTER OF ROOTS

It is often difficult to recruit and retain professionals at levels beyond the baccalaureate degree in rural and remote areas. This is true in the medical profession (Pathman, Konrad, & Agnew, 1994) as well as in special education and among related service personnel (c.f., Boe, 1991). For example, in North Dakota a Comprehensive System of Personnel Development report found that up to a quarter of all positions during a recent year in learning disabilities, behavioral and emotional disorders, speech/language, occupational therapy, and school psychology were either open or filled with temporary or in-training individuals.

Billingsley (1993) reported that teachers' decisions regarding staying in a position were influenced by three classes of variables, which she termed employment, personal, and external. Bornfield, Hall, Hall, and Hoover (1997) found limited support for the model, specifically that external factors predicted the attrition of special education teachers and related service personnel in a rural state.

Employment. Employment factors are those associated with conditions on the job, including interpersonal climate and workload. Presumably, job satisfaction is a personal or employment-based factor related to decisions to stay in or leave a position. All else being equal, the most capable teachers are more likely to leave positions than their less effective colleagues, probably as a function of mobility (Singer, 1993). A perceived lack of adminsitrative support, inexperience, and excessive paperwork have been tied to attrition. Burnout has been associated with turnover in some studies (Billingsley & Cross, 1991; Lauritzen, 1986).

External. Factors external to the job and the person have been associated with attrition. For example, Matthes and Carlson (1987) reported that communities with populations of less than 2,500 experienced more difiiculty recruiting and retaining teachers. The lack of, or rather perceived lack of, social and professional opportunites in small towns may affect retention and recruitment (Helge & Marrs, 1982; Stone, 1990).

Personal. Age (younger teachers leave at a higher rate; McKnab, 1983) and gender (female teachers leave positions at a higher rate; Billingsley, 1993) both affect turnover rates. Age probably functions as a correlate with years-in-position, which is related to professional retention. An "inertial" factor seems to be in effect: The longer a teacher is in a community, the more involved they become--the more tied they are to that area. Cutchin (1997) developed a model for analyzing the retention of physicians in small towns in which the tendrils of rooted associations played the central role. It is difficult, if not impossible, to separate external and personal factors.

In the following study external, employment, and personal factors were investigated in a rural state for their relationship with retention of special education teachers and related service personnel. The study is a reanalysis of data first presented by Bornfield et al. (1997).

Method

Subjects. Subjects were the same as those reported by Bornfield et al. (1997). Approximately half of special education teachers and related service personnel from a midwestern state who could be identified as leaving a position during one year (1995) were located and interviewed over the phone. It was estimated that 11.5% of target individuals turned over that year (N = 105), of whom 42 were located (hereafter "Leavers"). None of the 42 were asked to leave their positions. It is important to note, however, that within-state and within-position leaving rates overestimate exits from the special education field because teachers sometimes move to jobs in neighboring areas or states. In the present case, 81% of the sample took positions in education for the next year. Forty-five educators and support persons from similar-sized school districts were selected at random from the state directory of credentialed teachers and professionals. It was ascertained that members of the contrast group had not left a position during the year in question (hereafter "Stayers"). The current investigation may better be thought of as a study of "Movers" rather than "Leavers."

Procedure. Two graduate student interviewers phoned each Stayer and Leaver in order to conduct a twenty-minute interview. All located Leavers and 44 of 45 randomly selected Stayers agreed to be interviewed.

Instruments and Variables. Interviewers administered the Masslach Burnout Inventory (MBI; Maslach & Jackson, 1993), and a short form of the Minnesota [Job] Satisfaction Questionnaire (MSQ; Vocational Psychology Research, 1977). The MBI produces three non-independent measures related to burnout: emotional exhaustion, depersonalization, and sense of personal accomplishment (SOPA), the latter being a negative correlate of burnout. Depersonalization reflects the respondent's propensity to attribute job dissatisfaction to characteristics of clients (students, in the present case). The MSQ consists of a series of statements whereby respondents report their degree of satisfaction or dissatisfaction with items related to daily experiences at school.

The four measures (three burnout variables and job satisfaction) were produced by summing across items within scales and dividing by the number of items. In addition, internal consistency reliability was calculated for each measure, with the following results: Depersonalization = .90, Emotional Exhaustion = .55, SOPA = .88 (Cronbach, 1951). Items on the MSQ were highly intercorrelated, with an α of .90.

Items related to isolation (N = 3), marital status and dating (N = 3), services and cultural opportunites (N = 8), professional development (N = 3), and personal demographics were developed. Responses to these latter sets of items consisted either of numerical values ("How many friends do you have in the local community?") or a 10-point satisfaction scale ("On a 1-10 scale, how satisfied are you with housing where you teach? Let 1 = very dissatisfied and 10 = very satisfied."). Community size (of the teaching location) was dummy coded as follows: Towns with population below 5,000 were coded as -1, scores of 0 and +1 were coded for towns from 5,000 to 25,000 and greater than 25,000, respectively. The latter variable was not analyzed in the original Bornfield et al. (1997) paper.

Results: Predicting Staying vs. Leaving

When entered into a logistic regression, the variable "town size" as coded did not predict staying and leaving. This is probably due to an attenuated variance problem, as the majority of subjects resided in small towns (60%). Approximately 63% of school districts in the target state are located in the smaller communities. Thus, the solution reported by Bornfield et al. (1997) seems to best organize the data. Specifically, five variables added significantly to the regression solution: satisfaction with community as a place to live, housing satisfaction, miles/month traveled for services and entertainment, years teaching in current community, and self-reported match with teaching.

The solution indicated that leavers were less satisfied with housing choices (M = 2.45 [s = 4.79] vs. 7.27 [2.45]), rated their communities lower as to quality of life (5.87 [2.38] vs. 7.22 [1.52]), traveled further to centers for services and entertainment (304.20 [359.8] vs. 236.3 [434.7]), had been in their current positions for shorter periods than had stayers (5.23 years [4.68] vs. 11.59 [6.66]). Leavers also rated themselves as a better match for the teaching profession (M = 8.5, s = 1.27) than did stayers (M = 8.0, s = 1.68).

Via examining open-ended responses by subjects, Bornfield et al. (1997) added two points to the above analysis. First, no relationship was noted between satisfaction or burnout on the one hand and Staying vs. Leaving on the other. In open ended comments, Stayers reported as many frustrations with positions and no more elements of satisfaction than did Leavers. Second, the pattern emerging from both statistical and qualitative analyses was that Stayers appear tied to their positions by family, community, and regional ties. "My husband farms in the area and it's a job," sighs a representative respondent. Elderly parents, spouses' jobs, and other family considerations were the most commonly-voiced external factors leading to staying.

Results: Predicting Satisfaction

If individuals are tied to rural location by external and personal factors and not job-related factors, it is important to determine which of these variables predict job satisfaction. If these variables are malleable, then perhaps the quality of work life for educators in rural states, tied to positions by family considerations, could be increased.

Presumably, professionally-satisfied educators evidencing higher rates of satisfaction would provide better services to youngsters with disabilities.

A true-stepwise regression was calculated with the MSQ job satisfaction variable serving as the criterion. Otherwise, the same variables as noted above were entered into the model (Norusis, 1994). Stepwise was appropriate in the present case for two reasons. First, the analysis was exploratory. No theoretical model with sufficient a priori support was available which would justify more directed solutions such as path analysis or structural equation modeling. Second, insufficient numbers were available to power complex multivariate methods.

The matrix was conditioned via examining the set for highly correlated independent variables, thus reducing the possibility of losing significant effects to multi-colinearity. In addition, plots of residuals for selected models against predicted values were examined for correlated error. One variable, 'miles to services and entertainment per month,' which proved significant in an initial model (adjusted R^2 = .55) was extremely negatively skewed. Many subjects scored 0 or near 0 (if they lived very close to or in the community where they sought services). This caused errors to accelerate at higher levels of the variable. Thus, a $\log_{10}$ transformed version of the variable and miles was employed in analyses. In the second model (in any of its permutations), 'miles to services and entertainment' no longer proved significant.

Steps were calculated until no more variables met the criterion for entry or removal (using p = .05 for entry [PIN] and p = .10 [POUT] for removal). Aside from the intercept, four variables predicted MSQ. These are shown in Table 1, in order of their selection. No variables were removed from the regression once entered.

Table 1. Variables predicting MSQ (Job Satisfaction).

Term/Variable	Stand. Estimate (α or β)	T	p
Intercept	1.780	4.35	.0001
Satis/professional development	.340	3.19	.0025
Emotional exhaustion	-.371	-3.55	.0009
Sense/personal accomplishment	.257	2.87	.0061
Satisfaction with community	.238	2.59	.0127

The Multiple coefficient of determination for the model was .787, while the adjusted R^2 was calculated at .5881. The F testing the null hypothesis that the entire solution was 0 was 19.56. The null was rejected with a p of less than .0001.

As was true of Staying vs. Leaving, town size did not appear as a predictor; once more, this may have occurred because of a floor effect, the great majority of stayers and leavers working or having worked in small towns. The only variable related to communities (existence) was the last entered into the model, 'satisfaction with the community.'

The importance of 'satisfaction with professional development' as a predictor decreased as other variables came into the solution, though it ended up as an integral part of the solution. Emotional exhaustion (Maslach & Jackson, 1993), a negative correlate, added most variability to the model. Sense of personal accomplishment, a significant variable, is also one of the three Maslach burnout indices.

Job satisfaction in this rural state appears to be predicted largely by employment-related factors, including burnout (or the lack thereof, more accurately) and satisfaction with the professional development alternatives offered through positions.

The three professional development variables (amount of inservice; support for out-of-district conferences, and satisfaction) were highly intercorrelated (average $r_{xx} = .61$). In future studies the three variables together may serve as a better predictor if entered as a set in setwise regression or combined to form an overall professional development variable. It is useful for special education administrators to recognize that an active professional development program **may** serve to increase the satisfaction, performance, and ultimately the retention of qualified staff members.

The only external or community variable which predicted job satisfaction was ratings of satisfaction with the community [in which one worked]. Even this variable, however, could be seen as a personal variable as the community's quality was quantified as perceived by respondents. This variable is the only one related to both job satisfaction and Stayer vs. Leaver status.

A [very] tentative adjustment of the model first proposed by Billingsley may be posited, given the present results. First, it appears that external (i.e., community and family) variables are most directly related to attrition, while employment factors (burnout and professional development) are most closely related to job satisfaction. External factors (including ties to the community) more directly predict recruitment and retention. At the same time, personal and employment variables predict job satisfaction. Job satisfaction's impact on attrition is indirect, probably mediated by mobility-based issues such as employability, willingness to move, or ability to move.

With a greater number of subjects, we would expect to observe a weak relationship between job satisfaction and retention, mediated by such variables as ratings of teaching skill and mobility (Billingsley, 1993). A weak predictive relationship between retention and job satisfaction would also be observed because the decision to stay (predicted by external and community factors primarily) would cause educators to report slightly higher satisfaction scores in order to reduce cognitive dissonance. External variables (i.e., familial and community associations) would also affect on job satisfaction, albeit weakly, as working in a community to which one feels tied would be expected to increase job satisfaction.

References

Billingsley, B. S. (1993). Teacher retention and attrition in special and general education: A critical review of the literature. Journal of Special Education, 27(2), 137-174.

Billingsley, B. S., & Cross, L. H. (1991). Teachers' decisions to transfer from special to general education. Journal of Special Education, 24, 496-511.

Boe, E. E. (1991). National and state attrition data: Analysis and policy implications. Paper presented at an elementary and secondary education conference. Sponsored by the National Center for Education Statistics, U. S. Department of Education.

Bornfield, G., Hall, N., Hall, P., & Hoover, J. H. (1997). Leaving rural special education positions: It's a matter of roots. Rural Special Education Quarterly, 16(1), 30-37.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.

Cutchin, M. P. (1997). Community and self: Concepts for rural physician integration and retention. Social Science in Medicine, 44, 1661-1674.

Helge, D. I., & Marrs, L. W. (1982). Personnel recruitment and retention in rural America: A growing problem. The Pointer, 26(2), 28-33.

Lauritzen, P. (1986). Comprehensive assessment of service needs for special education. Madison, WI: Wisconsin Department of Public Instruction.

Maslach, C., & Jackson, S. E. (1993). Maslach burnout inventory (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

Matthes, W. A., & Carlson, R. V. (1987). Why do teachers choose rural schools? The Education Digest, 52(6), 27-29.

McKnab, P. (1983). Special education personnel attrition in Kansas, 1976 to 1982: A summary of attrition rates and an analysis of reasons for quitting. Washington, DC: Office of Special Education and Rehabilitative Services, Division of Personnel Preparation. (ERIC Document Reproduction Service No. ED 238 231)

Norusis, M. J. (1994). SPSS 6.1: Base system user's guide, Part 2. Chicago, IL: SPSS, Inc.

Pathman, D. E., Konrad, T. R., & Agnew, C. R. (1994). Studying the retention of rural physicians. The Journal of Rural Health, 10, 183-192.

BEST COPY AVAILABLE

Singer, J. D. (1993). Are special educators' career paths special? Exceptional Children, 59, 262-279.

Stone, D. (1990). Recruiting and retaining teachers in rural schools. Knowledge Brief, 4, 1-5. San Francisco, CA: Far West Laboratory for Educational Research and Development.

Vocational Psychology Research. (1997). Minnesota Satisfaction Questionnaire. Minneapolis, MN: University of Minnesota.

Lloyd R. Kinnison
Texas Woman's University
Denton, Texas

Dennis Cates
Cameron University
Lawton, Oklahoma

Carol Baker
Northwest Missouri State University
Maryville, Missouri

PRENATAL DRUG EXPOSURE IN THE HEARTLAND: RURAL DAY CARE TO THE DEFENSE

Alcohol remains the primary drug of abuse in rural areas, although the use of crack and cocaine are increasing, while tobacco and chewing are also problems (National Professional Resources, Inc., 1989). In rural communities, where the people know each other, it is more stigmatizing to seek help from outside professionals. Rural areas have the same drug problems of urban areas, but have limited resources to combat the problems (National Professional Resources, Inc. 1989).

Recent studies and news reports have documented that children exposed to various types of illegal drugs taken by the mother are entering day care facilities in increasing numbers. According to Barone (1995), few researchers have actually followed children known to have been prenatally exposed to drugs beyond infancy. Therefore, statistical data are insufficient even though there are indications that approximately 375,000 children are annually exposed to crack (Barone, 1995; Behrmann, 1990; Feig, 1990). The National Institute on Drug Abuse 1988 Survey reveals that 8.8% of women of childbearing age admitted to having used an illicit drug in the month questioned. The Committee on Substance Abuse (1990) stated 1 in 10 infant may be exposed to illicit drugs during pregnancy and that 11% of the women delivering babies used illegal drugs at some time during pregnancy (Crowe & Reeves, 1994).

The number of women of childbearing age testing positive jumped from 25% in 1972 to 40% in 1988. The U.S. Department of Human Services (Feig, 1990) reported in FY 1988 that 32.5% of admission to drug rehabilitation programs were women. The average age reported in Massachusetts was 24. The population of women was not limited to low income or minority women only, but included women from middle and upper SES background (Feig, 1990);(Weston, Irvins, Zukerman, Jones, & Lopez, 1989). Thus, the low income women use public hospitals where as middle and upper class women use more private hospitals. Therefore, the substance abuse is less likely to be reported. In rural areas the estimated incidence of substance abuse is more difficult to determine due to the higher costs associated with treatment programs and distance to treatment centers. Consequently, treatment programs for alcohol and other substance abuse may not be readily available.

Medical and developmental conditions of drug-exposed infants vary, depending on the type of drug, the stage of pregnancy, the amount of drug consumed, and/or if the drug was ingested alone or with multiple drugs in combination. In addition, the interaction effects of the environment, where the child is living, and effects of possible multiple drug usage, make it impossible to advocate only the prenatal exposure as being responsible for the child's condition. Consequently, drug-exposed children may exhibit a wide range of difficulties and/or ability levels (Sluder, Kinnison, & Cates, 1996/97). Some infants appear to be normal at birth while others exhibit symptoms continuously from the moment of birth (Weston, et al, 1989).

"The single most important factor influencing developmental outcomes turns out to be the cultural environment of the child..." (Brady, Posner, Lang & Rosate, 1994, p. 2). There are many environmental factors that may confound normal growth and development. Such risks may be single in nature or act in combination to produce those circumstances where the child is delayed or fails to meet developmental expectations. Slatton (1998) indicated the behavioral indices which are most likely to suggest or give suspicions include a highly agitated state, eating problem, and social interaction problems with other children and/or care givers. These children appear to have a lack of participation in activities and rapport with adults or other children in the environment. He further indicated the child who has been prenatal exposed to illicit toxins have a body weight that is less than desirable and seems to not like food.

In rural areas the effects of prenatal drug exposure may be compounded by two interrelated factors. The Office of Technology Assessment, Congress of the United States (1990) reported limited availability of obstetric providers and access to specialized care for women with difficult pregnancies and deliveries. Slatton (1998) further suggested that problems related to prenatal drug usage by mothers may less likely to be suspected and reported. His observations would seem to confirm Weston, et al (1989).

Based on the available research, the following suggestions are presented for day care providers and/or those involved in early childhood intervention programs.

Cognitive Skills

Cocaine and other drugs cause blood vessels in expectant mothers to constrict, reducing the flow of blood to the unborn child, thus causing a lack of oxygen to the brain (Woods & Plessigner, 1990). Bellisimo (1990) reported the jolt, or high, experienced as a result of the drug may cause the fetus to suffer small strokes. Such findings suggest permanent damage to the central nervous system and potential learning problems as the child grows older.

Children prenatally exposed to drugs tend to perform more poorly on tests designed to measure concentration, group interaction and the ability to cope within an instructional environment. Further, studies suggest that these children are often disorganized, unstructured, irritable, less goal directed and have problems processing information (See Table 1).

Language Development

These children are less likely to spontaneously vocalize or use gestures to communicate. In the preschool years, there appears to be prolonged learning for articulation, identifying pictures and using expressive language (Chapman & Worthington, 1994). Some children have better success with receptive language than expressive language development (Table 2). (Kinnison, L., Sluder, L. & Cates, D., 1995; Sluder, Kinnison & Cates, 1996-97).

Sluder, et al (1996-97) describes a young male who has superior receptive language to expressive language. In a recent follow-up study, the subject of this case study continues to exhibit superior receptive to expressive language skills (Kinnison, 1998). (See Table 2).

Social Development

Van Dyke and Fox (1990) reported drug-exposed infants exhibit poor interaction with their caretakers and peers. According to (Howard, et al, 1989) drug-exposed infants were more sedate in their interactions and exhibited distress when a care taker departed at the end of the work shift. Further, (Bellisimo, 1990) reported these children exhibited a resistance to establishment of strong attachments and to learning to love and trust others. Howard, Beckwith, Rodning and Kropenske (1989) observed less representational play. That is play appeared to be characterized by random scattering of toys and then indiscriminately picking them up. Sluder, Kinnison and Cates (1996-97) provided a contrasting description

BEST COPY AVAILABLE

of two children (Treavor and Melissa) and their different needs in social development. In an informal follow-up of Treavor, (Kinnison, 1998) has noted increased skills learning tasks even though there was still a deficit in expressive language ability. (See Table 3 & 4).

Connection with the Home and Parent

While the physical and developmental problems of drug-exposed and addicted infants are opressive in nature, the needs of parent must also be addressed. These children come from potentially dangerous and chaotic environments that aggravate the initial exposure to illicit substance abuse during the prenatal period. "Substance-abusing parents are unstable, move frequently, lack telephones, fail to keep appointments, and drop out of sight when abusing the illicit drugs" (Howard, et al., 1989, p. 8).

The age of the mother, exposure to illcit drugs, and estrangement from the base family create situations in which there is a lack of interpersonal support systems. Friends in the immediate environment are often drug users as well. While taking drugs, many mothers experience problems with memory, attention and perception. They are unlikely to keep appointments, often forget to care for their children while under the influence of the drug, and there is an increased probability that child abuse may occur. Howard, et al, (1989) described the living environment as unstable and often dangerous. The parents tend to be inconsistent in the care of the child. Therefore, the child is forced into an environment where the drug-exposure problem may not be adequately addressed (Bernardi, Jones, & Tenant, 1989). Thus, the child care facility and/or day care professional may be the first to register concern for the child who has not been accounted for during the past few days.

The increased need for intervention services has strained available social service agency programs. The National Committee for Prevention of Child Abuse has indicated that substance abuse is the most predominate characteristic of child abuse cases (Feig, 1990). Such information suggests an overwhelming need for training in parenting skills, if interventions are to be successful. These parents need basic information about child development and models of age appropriate expectations (Tittle & Clair, 1989).

Educational Research Findings

Public and private agencies are attempting to bring attention to the increasing number of drug-exposed infants and children (Greer, 1990; Yeager, 1991). However, little attention has been given to the problems these children are creating in under supported and insufficiently staffed day care settings. Frequently, care givers and teachers believe that children who have been prenatally exposed to crack or cocaine will be difficult to teach. There is a dearth of information regarding this population after they enter the school environment. There is an unanswered question whether these children may qualify for special education services. If these children are considered for special education, under what categorical label may services be provided?

Sluder, Kinnison, & Cates (1996-97) reported on two unique and different cases where the prenatal exposure to drugs produced children with different abilities and needs. The implications for these two children are overwhelming. One child, Treavor, qualified for a range of special education services, which met the individual child's unique needs. However, in the case of Melissa, the provision of possible special education services was not possible, as she did not qualify for services under the disability areas available. We, as educators must make ourselves aware of the potential effects of illicit drugs on children. The day care provider will be the first professional to notice the potential differences that children bring to the educational environment. We must be cognizant of the behavioral indicators that children exhibit and be prepared to engage in child case studies to determine if factors are present that suggest problems associated with prenatal drug exposure.

Recommendations

Training must be provided to day care providers in normal growth and development. Within the training sequence the care takers must become knowledgeable of the behavioral characteristics of children who have been prenatally exposed to illicit drugs. Day care workers should be asked to provide daily observation of children who are not meeting normal development tasks.

Because the drug-addicted parent is often incapable of transferring crucial information, collaboration among hospital neonatal-care units, social service agencies, day care providers, and public schools would be highly desirable. Computer programs are currently available that will facilitate the tracking of these children as they progress through the social service agencies. Day care providers must be an integral part of this information tracking system.

University based research must be solicited and used to determine the best and most effective models for assisting in the development of drug-exposed children and translating the research results into useful information for the child care providers and early childhood programs. The data gathered during the early years of development could provide researchers with basic information concerning best practices for assisting drug-exposed infants and children in day care settings. Moreover, these data will be helpful in giving the researchers vital information about how these children will learn best when they begin their traditional school journey.

Planning for the future must begin immediately. The anticipated costs of educating these children are unknown, but available information suggests it will be substantial. Cooperative planning between various services providers is essential. "How much of the child's problems are the result of inadequate care needs to be researched" (Feig, 1990, p. 24). The only statement that may be made unequivocally is that drug-exposed infants and children will require the day care community to reevaluate present practices and make adjustments to meet the unique developmental needs of the children.

References:

ARCA Factsheet Number 49 (1997). Children with prenatal drug and/or alcohol exposure. ARCA National Resources Center for Respite and Crisis Care Services. U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth, and Families, Children's Bureau, No. 90-CN-0178. Washington, D.C.

Barone, D., (1995-96). Children prenatally exposed to crack or cocaine: Looking behind the label. Reading Teacher, 49, (4), 278-289.

Becker, M., Warr-Leeper, G., & Leeper, H. (1990). Fetal alcohol syndrome: A description of oral motor, articular, short-term memory, grammatical, and semantic abilities. Journal of Communication Disorders, 23, 97-124.

Behrmann, J. (1990). Caring for and educating the children of drug-using mothers: A challenge for society and schools in the 1990s. Counterpoint, 11(2), 15-16.

Bellisimo, Y. (1990, January). Crack babies: The school's new high risk-student. Thrust, 23-26.

Bernardi, E., Jones, M., & Tennant, C. (1989). Quality of parenting in alcoholics and narcotic addicts. British Journal of Psychiatry, 154, 677-682.

Brady, J., Posner, M., Lang, C., & Rosati, M., (1994). Risk and reality: The implications of prenatal exposure to alcohol and other drugs. Educational duplications of prenatal exposure to drugs. U. S. Department of Health and Human Services, Washington, D. C.

Chapman, J. K., & Worthington, L.A., (1994). Illicit-drug-exposed children: Four critical need areas. Paper presented at the Council for Exceptional Children Annual Convention, Denver, CO.

Chasnoff, I. J., Griffith, D., Freier, M., & Murphy, J. (1992). Cocaine poly drug use in pregnancy: Two-year follow-up. Pediatrics, 89, 284-289.

Committee on Education and Harbor. (1990). Human Services Act of 1990. Washington, D.C.: 101st Congress.

Committee on Substance Abuse. (1990). Drug-exposed infants. Pediatrics, 86(4). 639-642.

Crowe, A., & Reeves, R., (1994). Treatment for alcohol and other drug abuse: Opportunities for coordination. U. S. Department of Health and Human Services: Washington, D. C.

Doberczak, T. M., Shanzer, S., & Kandall, S. P. (1988). Neonatal neurologic and electroencephalographic effects of intrauterine cocaine exposure. Journal of Pediatrics, 113, 354-358.

Feig, L. (1990). Drug-exposed infants and children: Service needs and policy questions. Washington, D.C.: U. S. Department of Health and Human Services, Office of Human Services Policy, Division of Children and Youth.

Fried, P., & Watkinson, B. (1990, April). 36 and 48 month neurobehavioral follow-up of children prenatally exposed to marijuana, cigarettes, and alcohol. Developmental and Behavioral Pediatrics, II, (2), 49-58.

Greer, J. (1999). The drug babies. Exceptional Children, 50(5) 382-384.

Griffith, D. R., Azuma, S. D. & Chasnoff, I. J., (1994). Three year outcome of children exposed prenatally to drugs. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 20-27.

Howard, J., Beckwith, L., Rodning, C., & Kropenske, Y. (1989). The development of young children of substance-abusing parents: Insights from seven years of intervention and research. Zero to Three, 9(5), 8-12.

Kindlon, D., & Earls, F. (Fall, 1996). The effects of prenatal exposure to tobacco, alcohol and cocaine. The Chicago Project News, 1-9.

Kinnison, L., (1998). A follow-up study of Treavor and Melissa. Unpublished research, Texas Woman's University, Denton, Texas.

Kinnison, L., Sluder, L., & Cates, D., (1995). Prenatal drug exposure: Implications for teachers of young children. Day Care & Early Education, 22, (3) 35-37.

National Professional Resources, Inc. (1989). Substance abuse in rural communities. National Professional Resources, Inc. Port Chester, WY.

Norris, M. L. (1991, July). The class of crack's innocent victims. The Washington Post, pp. 8-14.

BEST COPY AVAILABLE

Office of Technology Assessment, Congress of the Unites States (1990). Health care in rural America: Summary. Office of Technology Assessment: Washington, D. C.

Rist, C. M. (1990a). The shadow children. The American School Board Journal, 177, 19-14.

Rist, C. M. (1990b). Crack babies in school. The Education Digest, 53 (9), 30-33.

Seigler, R. S. (1986). Children's Thinking. Englewood Cliffs, NJ: Prentice-Hall. Van Dyke, D. C., & Fox, A. (1990). Fetal drug exposure and implications for learning in the preschool and school-aged populations. Journal of Learning Disabilities, 28(3), 160-162.

Slatton, T. (1998). Personal correspondence.

Sluder, L., Kinnison, L., & Cates, D. (1996-97). Prenatal drug exposure: Meeting the challenge. Childhood Education, 73, (2), 66-69.

Tittle, B., & Claire, N. (1989). Promoting the health and development of drug-exposed infants through a comprehensive clinic model. Zero to Three, 9(5), 18-20.

Tyler, R., (May, 1992). Prenatal drug exposure: An overview of associated problems and intervention

Table 1
Cognitive Indicators

Decreased imitative play
Less pretend play or exploration of the environment
Difficulty concentrating/distract ability
Disorganization
Inability to structure work or play activities
Diminished ability to stay on task
Less goal-directed behavior
Increasing disruptive behavior
Greater need for a more controlled learning environment

Adapted from: Kinnison, L., Sluder, L., & Cates, D. (1995). Prenatal drug exposure: Implications for teachers of young children. Day Care & Early Education, 22, (3) 35-37.

Table 2
Language Development Indicators

- Delayed language
- Limited early vocalizations
- Prolonged articulation errors
- Difficulty in picture identification
- Problems following directions
- Limited vocabulary/decreased acquisition of words/receptive language superior to expressive language

---

Table 3
Play and Affective Indicators

- Reluctance to initiate play activities
- Decrease in spontaneous play
- Aimless wandering through the play area
- Inability to stack blocks/motor difficulties
- Apparent confusion in some play situations
- Over stimulated by too many children/adults in same environment
- Awkward understanding of and response to social cues
- Over stimulated by excessive noise
- Occasional aggressive behavior in group situations
- Depressed affect
- Difficulty making transitions and changes
- Difficulty in self regulation of behavior

Table 4
Motor Indicators

- Awkward eye and hand coordination
- Trembling arms and legs when reaching for objects
- Excessive fidgeting and/or hyperactivity
- Clumsy or immature use of tools such as spoons, crayons or small toys
- Fine motor dexterity difficulty
- Poor visual attention to people and objects
- Gross motor clumsiness

Steve Pavlovic, M.A.
Billie Friedland, M.S.
Sara Brannan, M.Ed.

West Virginia University
Morgantown, West Virginia

PROMOTING GREATER REFLECTIVITY IN RURAL IN-SERVICE PRACTICUM EXPERIENCES

Introduction

This study is a continuation of an earlier pilot study, Reflectivity in Supervision and Teaching (Pavlovic & Friedland, 1997), and incorporates changes which resulted from that pilot. The original study was aimed at developing a method to encourage a higher degree of reflectivity by on-the-job practicum students working in rural West Virginia public schools and human service agencies. While the current study maintains the same goal, encouraging teachers to use reflective techniques in their practice, the authors have learned much about the processes of change in reflectivity, slightly altered their view of the nature of reflection, and have eliminated the quantitative aspect of their study in favor of the richness afforded by a qualitative approach to data collected. Inter-rater reliability ratings for scaling the data ranged no higher than 47% to 53%, suggesting that the criteria developed by the authors was too open to interpretation to be used at any comfort level. In addition, reflectivity, as the authors had defined it, appeared to be such a rare commodity that it seemed fair to assume that at least part of the problem lay within the definition of reflectivity rather than entirely within the students. It was decided that the researchers should themselves step back and look to see what issues do in fact occupy the thoughts of in-service practicum students with whom they are working.

Regular and special education are rapidly changing fields, and both require daily ethical deliberation (Howe, & Miramonte, 1992) or reflection. Technology is changing everyone's life experience, communities are becoming less homogeneous than they were in the past, and federal mandates (IDEA, 1997) require professionals to work collaboratively. Successful negotiation of these requirements depends on an increased ability to examine issues from a variety of perspectives, and the ability to reflect beyond daily classroom events.

These changes are particularly forceful in the program areas of early intervention and severe and multiple disabilities. In these areas, the professional is typically charged with many roles and responsibilities such as assessment, program development, service coordination, family and child advocacy, and other activities which bring them into contact with a wide spectrum of the community and require the negotiation of multiple needs and perspectives. The special education professional may also have to balance meeting professional mandates with loyalty to their employer, who may have difficult management and fiscal responsibilities. Administrative concerns may not directly conflict with professional demands, but often, they do not support professionals in their attempts to provide meaningful educational experiences for students and their families.

What action should the professional working in a rural county take when a student's individual needs call for regular physical therapy and there is no physical therapist working in that county? What is a teacher's responsibility when the agency demands that she provide one-to-one massed trials intervention with a student who has severe developmental disabilities, when her own philosophy and professional opinion tell her that a functional curriculum carried out in the context of daily routines is more effective practice? These are but two of the many dilemmas faced by practicing professionals on a daily basis. Without the ability to reflect upon their own experiences,

BEST COPY AVAILABLE

how can they begin to respond to these dilemmas? How can they affect positive changes in the lives of the children and families they serve, and ultimately, in the field?

The minimum requirement for reflection is the ability to distinguish a dilemma from the many daily phenomena, identify the array options available for responding to a situation, and making a reasoned response to the particular presentation of circumstance (Dewey, 1963; Liston & Zeichner, 1987; Tippins, Tobin, & Hook, 1993). The present study proposes to examine the types of dilemmas that become apparent to a group of in-service practicum students and to look for indications of applied reflective processes.

Methods

Participants

The participants in this study are all West Virginia University practicum students in the early intervention, and the severe and multiple disabilities programs between the Fall 1996 semester and the Fall 1997 semester. Only those students who were doing an on-the-job practicum were selected. There were a total of 56 students. Of this total, only those who were completing a 6 credit practicum were selected for study and of these, only those who had saved Lesson Plans and Weekly Reflection Forms were included. A total of 37 practicum students' reflections were examined.

All of the participants worked in rural counties in West Virginia. There were a total of 33 women and 4 men included in the group. At the time of their practicum, students ranged in age from 26 years to 54 years, and had a variety of educational backgrounds. Nineteen students had undergraduate degrees in either elementary education, pre-K, or both, as their primary area of study. Four students had undergraduate degrees in physical education and health education, 4 in secondary education, 2 in special education, 1 in fashion design, and 2 had Regent's Degrees (granted for a combination of college preparation and life experience). Three were licensed speech pathologists, 1 had a B.S. in Nursing, and 1 had a B.S. in Business Administration. Twenty-seven students worked in the area of early intervention or preschool handicaps, and 10 worked with students who have severe and multiple disabilities.

Design and Procedures

A detailed description of the reflective practicum activities and their rationale is contained elsewhere (Pavlovic, & Friedland, 1997). Briefly, the activities included the practicum student completing a Reflective Teaching Pretest and Post-test, completing one Lesson Plan and Lesson Reflection for each week of the practicum, engaging with the supervisor in at least 6 Structured Reflective Dialogs based on a specific lesson plan and lesson observation, and completing Weekly Reflection Forms throughout the practicum. At the end of the experience, each practicum student creates a workable Personal/Professional Development Plan.

Comparative methods are used to analyze emergent themes, constructs, and patterns of responses (Gall, Borg, & Gall, 1996). Interpretive analysis examines the data within case and within context. Constant comparative analysis refers to the spiraling interplay between inductive and deductive thought processes while building hierarchical thematic constructs, checking for fit, and formulating working hypotheses. Comparative analysis approaches cases as configurational, allowing the researcher to look for likeness and differences across and within themes without resorting to probability and additive causality models (Ragin, 1987; Ragin, 1995, p. 189), thereby discovering linkages and patterns.

In this design, the researchers used the following approaches: (1) Interpretive analysis was affected by reading for an overall impression of the data accrued through weekly structured self-interviews (Weekly Reflection Form) and from pre and post-practicum data (Reflective Teaching Pre and Post-test) for all selected cases; (2) Constant comparison was used to analyze data chunks for fit with emergent categories; (3) In this design, collaborative sessions were conducted by the researchers to make cross comparisons of categories and to look for relationships across and within categories. Finally, the pre and post-test data were examined for validation of emergent themes, constructs, and patterns.

Data Analysis

The researchers purposefully selected samples based on the nature and length of their involvement with the practicum experience. A balance was maintained among the samples in terms of the elaboration of their responses, choosing both elaborate and brief responses. The data was entered into Hyperqual2 version 1.2 (Padilla, 1993). Thematic categories were identified. Data chunks were tagged and sorted into categories using constant comparison for fit to whole and to themes. Some chunks had several different tags. Hyperqual2 allows the researcher to maintain auditable trails of connectivity back to the original context. When data is sorted into theme stacks, the original context remains unchanged, and the researcher can easily navigate among stacks of sorted data and back to the original stack as it was entered for rereading and fit checking. Data cards are identified by case number and a unique card number assigned that is randomly by the program so that data may be lost.

Results

Four major thematic categories emerged from the data analysis. These are as follows: (1) Professional Growth, (2) Stressors, (3) Instructional Perspectives, and (4) Health and Social Welfare.

When considering professional growth, participants seek and receive validation for their own job and efforts put forth within the work place. This validation comes from a variety of sources, other professionals, parents, and students. Participants also acknowledge much empathy for the students in their charge and the students' families, however there were many indications of a basic fear of being ineffectual in working with children and their families, especially families of children who have severe and multiple disabilities. Overall, the participants believe that organizational and observational skills are necessary, and some recognize the need for professional growth in both these skill clusters. There was also indication that they recognize increasing demands for role release and role adaptation, but many of the comments in this area expressed ambivalence, and sometimes, resistance to the necessity for changing roles.

Systems problems are by far the largest contributors to increasing personal/professional stress. Poorly defined and loosely managed service delivery systems, along with enormous amounts of paperwork, were cited as major stressors. This was found to be directly related to participants' reported lack of time for instructional planning, instruction, and professional development, including reflective activities. A few practicum students indicated that the demands of the practicum experience itself contributed to their already increasing levels of stress. Some students cited poor relations among staff, funding issues, and concerns for children and families as contributing to professional "helplessness or burnout". Many are also not reading professional literature to seek resources even for minimal problem solving.

In the categories that clustered around instructional perspectives, indications were found for supporting the notion that a large number of participants are teaching from a developmental theoretical framework. They indicate a strong understanding of basic lesson planning for desired instructional outcomes. Some, but not all, participants demonstrated the recognition of incidental learning on the part of students. Many students commented on the importance of having a teaching style that is eclectic, flexible, and which promotes open discovery. They are aware of the students' need to develop self-determination and are beginning to look for ways to meet the need. As professionals, they feel supported if their respective systems promote collaborative planning, teaching, and problem solving. Of major concern to the researchers is that many systems do not yet support collaborative efforts of educators, and that the participants made frequent references to the importance of maintaining routine and a consistent schedule of structured activities. There appears to be a pervasive resentment toward interruptions and schedule changes.

Regarding health and social welfare, concerns about distracting and manipulative behaviors on the part of students are outweighed by concerns expressed about behaviors that threaten health and physical safety. Practicum students indicated that they feel competent to handle most distractions and manipulations, but behaviors such as self- injury (SIBS) or fighting on school grounds (aggressive acts) are more challenging. One reported bomb threat indicates an increasing sense of endangerment exists at least among some educators. Many participants registered concern for the physical health and fitness of the students they serve. Examples cited were increasing obesity coupled with inadequate nutrition, lack of exercise, and a lack of development in the skill cluster, use of leisure time. Participants expressed an understanding of the relationship between medical concerns and instructional outcomes, however, there were only two references to psychological wellbeing.

Discussion

Our original study, Reflectivity in Teaching and Supervision (Pavlovic & Friedland, 1997) developed from the belief that the role of teacher as decision maker varies based on the individual professional's perspective. Positivistic reflection is instrumental; Humanistic reflection is deliberative; Moralistic reflection explicates aims, values, and connection; and Constructivistic reflection calls for reconstruction at the following three levels: (1) teaching in relation to expected practice and learner outcomes, (2) self, in varied and changing roles of educator, and (3) presumptions and assumptions about educational and societal norms. Van Manen (1977) called this level of reconstruction the basis for social critique and change. As a result of our involvement with this project and our review of the literature (Dewey, 1963; Tippin, Tobin, & Hook, 1993), we consider the ability to distinguish a dilemma from the many daily phenomena of instructional practice to be the basic minimum requirement of reflection regardless of theoretical perspective.

The indications resulting from this qualitative study reveal that our practicum students are generally at the point where they are recognizing dilemmas and are beginning to look for solutions. However, analysis of the question regarding whether they read professional literature revealed the following findings: (1) they are searching for resources and connective information related to curriculum and instructional activities, and (2) readings related to more global issues are rarer and are not necessarily related to their particular practice.

Implications

The ability of our practicum students to identify options and resources available to them seems to be linked to a sense of disempowerment. This hypothesis is supported by the finding that teachers feel their educational systems are a source of stress rather than support. On-going research is necessary to determine to what extent the issue of empowerment is a factor in teachers' ability to reflect on their practice in relation to their beliefs about practice, and then to solve problems. We need to encourage systems change to support teachers, and encourage teachers to discover that they have the power and the ability to make those long term changes.

Conducting this phase of research has afforded the opportunity for us, as program supervisors, to reexamine the ways in which we support the efforts of our practicum students. We have initiated a listserv group to encourage networking, discussion, and sharing of resources and programming

BEST COPY AVAILABLE

ideas. Currently, we are working on the practicum students' need to make their individual postings anonymous to create a more comfortable environment for sharing problems. We are encouraging partnering for problem solving in each setting we visit. In addition, we are reviewing our collaborative efforts at program evaluation and planning in light of these findings and welcome the support of professional networking for these endeavors.

References

Dewey, J. (1963). Experience and education. New York: Collier.

Gall, M. D., Borg, W. R. & Gall, J. P. (1996). Educational Research, 6th ed. White Plains, NY: Longman Publishers USA.

Howe, K.R., & Miramonte, O.B. (1992). The ethics of special education. New York: Teachers College Press.

Liston, D.P., & Zeichner, K.M. (1987). Reflective teacher education and moral deliberation. Journal of Teacher Education, 38, 2-8.

Pavlovic, S.K., & Friedland, B. (1997). Reflectivity in supervision and teaching. (ERIC Document Reproduction Service No. ED 406 115).

Ragin, C. C. (1987). The comparative method: Moving beyond qualitative and quantitative strategies. Berkeley, CA: University of California Press.

Ragin, C. C. (1995). Using Qualitative comparative analysis. In U. Kelle (Ed.) Computer aided qualitative data analysis: Theory, methods, and practice (pp. 177-189). Thousand Oaks, CA: Sage Publications.

Tippins, D.J., Tobin, K.G., & Hook, K. (1993). Ethical decisions at the heart of teaching: Making sense from a constructivist perspective. Journal of Moral Education, 22, 221-240.

Van Manen (1977). In R.T. Clift et al. (Eds.) (1990). Encouraging reflective practice in education: An analysis of issues and programs. New York: Teachers College Press.

Resources

Padilla, R. V. (1993). HyperQual2 Version 1.2 [Computer Program]. Chandler, AZ: Author. (Address 3327 N. Dakota, Chandler, AZ 85224 USA)

BEST COPY AVAILABLE

The Good and the Bad in Distance Education
Gary Adamson Ed.D.
Defining Distance Education

The good is that which avoids GIGO (garbage in garbage out), the bad is that which is not convenient for the student. Not being convenient means the student is not considered first, the materials are time and space bound and economy was the watch word.
Instructional technology has a rich history. In the mid-fifteenth century it was predicted that the invention of printing would do away with the need for lectures! In 1922 Thomas Edison said," I believe that the motion picture is destined to revolutionize our educational system and that in a few years it will supplant largely, if not entirely the use of textbooks." The prophets are still among us today. However, new technology does not replace traditional technology, but rather is added to traditional technology. The strategy of pairing media together is a popular approach to distance education, also known as accessible learning.

The definition of distance education continues to be debated by the experts in the field. Some experts use a model of interaction between the instructor and the student to define distance education. Others approach the definition from a model of communication, a model of administration or a model of delivery. Even so a common characteristic in most definitions is that the instructor is separated from the student, or open learner, by time and space.

1. Technology is used to transcend that time and space to deliver the instruction.
2. Experienced distance educators use technology as a tool to facilitate instruction.

The process of choosing technology that will be used to deliver distance education must be guided by:

1. the nature of the subject matter,
2. the characteristics of the technology,
3. the needs of the student and,
4. the resources of the institution.

There is no 'super' technology that offers to fulfill all needs in all areas of consideration. Therefore, the selection of a technology to deliver education is an important step toward effective instruction.

Technology and Interaction

A common concern of educators and students is the issue of interaction between student and instructor. However, even though interaction is considered to be important to facilitate learning, it is not the most important factor when choosing a technology for distance education.
Bates (1990) reports,
"There is a myth of distance learners being isolated students living in a remote cabin or hut miles from the nearest civilization, and more importantly, miles from the nearest educational institution. While this may be true for an important minority (like ACRES members , by far the greatest number of open and distance learners live within half-an-hour's travel time to an educational institution offering a similar level of education. There is and even greater myth that students in conventional institutions are engaged for the greater part of their time in meaningful, face-to-face interaction with their teachers. In fact, in most post-secondary education, this kind of interaction is quite rare. The fact is that for both conventional and distance education students, by far the largest part of their studying is done alone, interacting with text books or other learning media. The difference is that for

distance learners, this fact is acknowledged by the designers of the teaching materials, who often take steps to build opportunities for interaction into the learning materials."

Each technology offers a different degree of interactively. Therefore, interactively for learning can be provided for by any technology. The media is flexible. Success for the student begins with a course design based on sound instructional principles.
Media as vehicles are specific to their content. Each vehicle carries specific cargo, such as, text, still pictures, moving pictures, audio or interaction. a medium, alone, does not influence learning, However, a medium that carries specific cargo and is chosen based on sound instructional principles and design does influence learning. "The potential effectiveness of media is not found in any variables that are inherent in the devices :(assuming they are capable of delivering the necessary stimulus), but in how the devices are used . This implies that technology is a technique for designing instruction rather than the more common perception of technology as a machine" (Wilkinson, 1984. p.1.).

Technology and compatibility, learning styles, and cost effectiveness

Another concern in choosing a delivery technology is the gap between the level of technology required from the student to complete the course of study, and the level of technology that is available to the student. In his article, Tiering Technology, Downes (1996) writes, "It's a frustrating dilemma. On the one hand we see the enormous potential of the many display and communications tools available on the Internet. On the other hand many of our users have only the minimum configuration, and so, cannot use these tools." Downes does not expect this trend to end soon. By the time the students have upgraded their skills and systems, another generation of technology is available. New technologies require new skills. Designers of Accessible Learning need to insure that students with any level of technology skills can have access to the content, regardless of their available resources.

Tiering, used as a design technique for accessible Learning courses, provides for compatibility between the level of technology used in the course design and the level of technology available to any student. Downes writes, "The idea of Tiering is that the entire course content is coded into the lowest level of technology possible. This means, essentially, a completely text-based technology. As new technology is introduced to enhance the course, new content is not added. Rather, the new technology is seen as offering alternative ways of handling the same material as the lower level. Downes proposes that adding new technologies gives the student more ways of seeing things, not more things to see. This concept is reinforced by the concept of Anchored instruction, where by a film etc. is made of a situation and shown to the students, thereby anchoring (fixing) in everyone's mind just what we are talking about in the program.

A Tiered course design is usually the best

It is generally accepted that the most effective learning occurs when the instruction is presented in several formats. Therefore. accessible learning courses that are tiered offer the student compatibility, and the control to choose the presentation that best accommodates his/her learning style. The advantage of the Tiering strategy for the learning institution is the cost effectiveness. This is reflected in the relationship between course development and resources. All courses world be developed in the simplest of technology, also known as the least expensive, and tiered to include the most complex technologies, often the most expensive, that are available to the institution.

Growth of distance education

In 1990, textbooks for courses in distance education theory and design predicted that onsite courses would be obsolete in 10 years. Campuses would be used for undergraduate programs and administrative details. Now in 1998. that seems very possible. New technologies explode with possibilities for new frontiers of delivering education. In fact, accessible learning is the fastest growing area of education world-wide (Open Learning Agency, 1992). The catalyst for this growth is innovations in technology development, and the increased demand of lifelong learning. The Open Learning Agency of British Columbia, Canada observed, :Of all the modes of lifelong learning. we believe that open and distance learning to be the most appropriate for adults. Indeed, it is the only form of education that was designed from scratch with lifelong learning in mind (1992)." Social trends support this tendency toward lifelong learning and accessible Learning.

In the Popcorn Report (1991), Faith Popcorn reports that society is moving from an industrial age into an information age. As identified by Popcorn (1991), a trend of the information age is cocooning. The baby boomers have characterized cocooning as looking for a haven at home. The traffic and crowds have become too much. This creates a desire to stay home for work, education, and recreation. As a result of the cocooning trend and the desire for lifelong learning, the field of accessible Learning is starting a straight up growth curve.

Instructional Models

For the most part, delivery models of distance delivery are currently classified according to the primary form of communication between the student and instructor. As computer and communication technologies advance, the line between them is rapidly blurring and the distinctions among models of distance delivery are quickly disappearing. Increasingly, students can access print, graphics, video, CD_ROMs and video conferencing through home computers via the World Wide Web. Eventually televisions and computers may be one in the same. These types of advances will make it more difficult and less meaningful to classify distance education in terms of delivery model. Instead, it will be increasingly important to consider distance education models in terms of instructional approaches many of which are use in traditional classrooms, such as open learning, problem-based learning, direct instruction, etc. As educators shift from considering the delivery technology as the basis for the model to focusing on the instructional approach, the implementation of available technologies will be more powerful and meaningful for students.

Jack T. Cole
R. Fletcher
Robert Gerke
Catherine Medina
New Mexico State University
Las Cruces, NM 88003-0001

THE PEN IS MIGHTIER THAN THE SWORD: HOW TO GET PUBLISHED IN RSEQ

What motivates professionals to submit manuscripts for publication? According to Henson (1986), institutional pressure for tenure, promotion, and merit pay may be a major reason for submitting manuscripts, but it is not the only reason. Many professionals submit manuscripts out of their desire to share professional knowledge. In that sharing, he asvises authors to select the journal that most represents their specialized body of knowledge. So what is the specialized body of knowledge considered by the editors of the Rural Special Education Quarterly (RSEQ)?

Specialized Body of Knowledge

The Rural Special Education Quarterly began as a newsletter, under the title National Rural Research Newsletter (1979) out of Murray State University. By the sixth volume, second issue, the newsletter became the Rural Special Education Quarterly and was and is the only national scholarly publication solely devoted to rural special education issues (Pawlak, 1985).

Since its establishment as the Rural Special Education Quarterly in 1985, the RSEQ has been a nationally refereed journal. This means that all manuscripts are reviewed (a) anonymously, (b) by nationally recognized experts, and (c) using a preestablished rating scale. By being a referred journal the RSEQ is similar to 66% of other professional journals in the field of education. Because the review is conducted anonymously using a preestablished rating scale, we are also consistent with the top 50% of professional journals as cited in the Phi Delta Kappan in Henson's biannual survey of editors/publishers(1988). If then, as Henson (1985) suggests, authors who submit manuscripts need to know what specialized knowledge RSEQ editors are tapping, what topics do the editors of the RSEQ consider and what criteria are followed?

According to the published guidelines for authors the Rural Special Education Quarterly editorial staff review manuscripts to ascertain whether or not submitted manuscripts basically meet the following criteria:

BEST COPY AVAILABLE

1. Is the topic rural special education in its focus;
2. Is the target audience identified;
3. Does the manuscript represent a significant contribution to professional literature in the field of rural and small school education;
4. Does the manuscript demonstrate practicality; and
5. Does it have an applied focus.

Beyond the general emphasis on rural special education, a meta-analysis of ten years of publications conducted by RSEQ staff (Hepburn, 1992) resulted in the identification of four major publication strands: (a) exemplary models of service delivery; (b) research [e.g.,applied, theoretical, evaluative, case study]; (c) needs; and (d) policy and position papers. Within these four strands, some 45 domains were identified. The top ten domains are ranked in frequency of topics as follows (Table 1):

Table I

Rank	Topic	No. of Articles
1.	Research (basic, questionnaire, applied, evaluation, experimental)	126
2.	Preservice/Inservice	104
	Exemplary Service Models	104
3.	Recruitment and Retention	57
4.	Rural Values and Attitudes	50
5.	Families and Parents	48
6.	Multicultural Issues	41
7.	Supervision and Leadership	38
8.	Resources and Finances	36
9.	Transition	34
10.	Technology	31

The top ten ranking is consistent with the findings of Henson (1988), that 44% of all published articles report on research of some kind, suggesting that all writers should consider gathering data to use in their articles. However, findings of a review of the past 10 years of RSEQ publications, indicate that outside of these top ten topics, subjects can be varied so long as they address rural issues and contribute new knowledge to that specialized pool of information (e.g., early childhood, legal issues. teacher collaboration, disabilities by category, gifted, assessment and diagnosis, related services).

Once the topic is assessed for appropriateness, then the style and quality of each manuscript is assessed.

BEST COPY AVAILABLE

Style of Submission

As with most other professional journals in education, publication in the RSEQ requires a style that is consistent with the Publication Manual of the American Psychological Association (4th ed.). Generally RSEQ editors look for content and organization as well as non-biased language style of the manuscript. The editors look for orderly presentation of ideas, smoothness of expression, economy of expression, precision, and clarity. The structural style of manuscripts consisting of grammar, punctuation, spelling, use of abbreviations, headings and seriation, and accuracy of sources for referenced material should also be carefully addressed by authors.

RSEQ editors prefer manuscripts which have abstracts that do not exceed 100 words and contain figures and charts that are presented in final reproducible format (with figures or charts occupying no more than a single type written page). Editors expects the authors to submit tables exactly as they are to appear in the RSEQ or constructed in a manner which uses the required software with the appropriate tabs, columns, and settings. Photographs are not used.

Although the number of pages is not specified in RSEQ editorial guidelines, Henson (1988) indicates that the average number of pages for submitted manuscripts is ten. Lengthy manuscripts may be given less consideration because they are cost-prohibited.

So, what can you do to enhance the chance of acceptance of your manuscript for publication?

1. Make sure you read several issues of the RSEQ--Become familiar with the content and writing styles.
2. Direct your article to the readers not to the editor.
3. Write simply and clearly about the topic that you like and understand.
4. Be sure you are contributing new knowledge, techniques, or approaches from a distinctly new perspective.
5. Proof read your manuscript and edit out jargon, superfluous words, and errors.
6. Choose someone who is not directly involved in your work to review your article who resembles the typical reader of the RSEQ. Consider their recommendations for changes and accommodate your colleague's criticism.

Summary

With close attention given to the guidelines for publication as outlined on the inside cover of the RSEQ, manuscripts which (a) address targeted rural special education issues, (b) contribute new information to the body of knowledge, (c) use correct terminology, (d) are organized, and logically developed, and (e) contain appropriate writing styles, grammar, and non-biased language have a good chance of being selected. The review process takes approximately four months, and currently 60% to 70% of manuscripts are selected for publication. If your manuscript is selected, congratulation. If your manuscript is rejected, don't give up! Try, again, for "... the pen is mightier than the sword."

References

Center for Innovation and Development. (1979). National Rural Project Newsletter, 1(1). Murray State University.

Cole, J.T., (Ed.), (1994). Rural Special Education Quarterly, 13(4).

Henson, K. T. (1988, June). Writing for education journals. Phi Delta Kappan, 752-745.

Henson, K. T. (1986, April). Writing for publication: Playing to win. Phi Delta Kappan, 602-604.

Hepburn, E. (1993, March). NRP/RSEQ Summary Sheet. Unpublished report presented to the Editorial Board of the Rural Special Education Quarterly at the 13th Annual Conference of ACRES, Savannah, GA

Pawlak, K. (Ed.). (1985). Rural Special Education Quarterly, 6(2).

Michael E. Sullivan, Ed.D.
Marshall University Graduate College
So. Charleston, WV 25303

ANTICIPATING FUTURE TEACHER SHORTAGES: A REVIEW OF ONE ALTERNATIVE APPROACH FOR RURAL DISTRICTS

Historically, teacher shortages in critical certification areas such as special education have generated extensive dialogue between public education (K-12) and teacher education programs. West Virginia, a very rural and sparsely populated state has been no stranger to these discussions. A review of the West Virginia Department of Education's annual reports, Supply/Demand of Educational Personnel, for the last nine years revealed that nearly one of every three educators assigned to special education settings serve don some type of sub-standard license. Further, the percentage of personnel on emergency licenses did not decline significantly in spite of the efforts of both public and higher education.

Investigations into the nature of chronic special education teachers shortages revealed a number of interesting factors contributing to this problem. One fact which became immediately apparent was that there was actually no shortage of fully certified personnel in some areas of exceptionality. For example, in 1995-96, there were 2311 fully certified mental retardation professionals teaching in West Virginia (West Virginia Department of Education, 1996). During the same year, there were 1137 employees, 19.1 percent were serving on sub-standard licenses. The same pattern existed for other areas of assignment for a number of years. The illusion of "shortage" was created by state code and regulation which allow certified general educators to use emergency licensure as an entry-level route to secure employment, obtain full licensure in special education while at the same time accruing seniority within their school district. Then, when a general education position opens, the recently licensed special educator may use their senior status to "bid out", leaving yet another assignment to be filled on an emergency-licensure basis. Recognition of this problem served as a primary force in the development of an alternative certification track for students whose formal training was in a field other than education. Prior to describing this program, it is important to set the context within which the development of the alternative program occurred.

Overview-Alternative Teacher Certification

Koff, Floris and Crouin (1976) described traditional teacher certification as a process developed to assure that those who enter the teaching profession meet some set of minimum competency standards. Each state has the latitude to set these standards and a document developed by the National Association of Directors of Teacher Education and Certification annually describes these requirements. Typically, traditional certification programs included specific credit hour requirements to be earned from higher education institutions in the content (subject) area, professional studies (e.g. methodology) and in practica (student or practice teaching). Colleges and universities typically verify that the candidate has met minimum credit hour standards at which time many state education agencies also require successful completion of competency tests prior to the issuance of the certificate.

Alternative teacher certification, within the context of this paper, may be described as a departure from the more traditional undergraduate route through teacher education programs. In addition, the program to be described differed from traditional certification by establishing a different target population and length of training rather than in program content, vigor or expected outcome.s This was consistent with the position advocated by Smith et al. (1985). Further, the features of alternative programs recommended by the American Association of Colleges for Teacher Education were adopted and included rigorous admissions standards, curriculum appropriate to the beginning teacher, a supervised internship and competency examinations in both the subject field and professional studies.

BEST COPY AVAILABLE

The alternative program described in this paper is one of a series of programs offered among the states for the purpose of attracting quality adults who already have at least a bachelor's degree into the teaching profession. As of September 1995, nineteen states had alternative certification programs that were recognized in the most recent National Center for Education Information report (1995) on alternative teacher certification.

Program Description

The goal of the alternative special education program is to provide educational opportunities for students at the post-bachelor's and master's degree level to become teachers of exceptional children in one of three categories: mental retardation, specific learning disabilities, or behavior disorders. Individuals seeking certification in the areas of mental retardation, learning disabilities, and behavior disorders may come into the program from non-education fields.

Program experiences in special education involve examining traditional and contemporary practices, using the terminology of the field, and identifying the characteristics of each group of exceptional children relative to historical, environmental, educational, cultural, legal and political conditions. The utilization of standardized and criterion referenced diagnostic tests in the cognitive and affective areas is also a part of program experiences.

Developing cognitive and affective diagnostic hypotheses for each child and generating and translating those data into educational programming are stressed in the program. Selecting and developing materials, determining appropriate approaches to instruction, and developing and using behavioral objectives are of principal importance. Additionally, planning and developing a total teaching environment that promotes effective learning through flexible scheduling in a variety of administrative arrangements are required experiences in the alternative special education program.

GENERAL ADMISSION REQUIREMENTS

Students seeking admission to the Special education Program must submit the following:

1. Official transcripts from all colleges or universities (an undergraduate GPA of 3.0 or above is preferred);
2. Three recommendations on forms available in the Office of Admission and Records;
3. Detailed personal statement of life and work experiences and career goals and aspirations regarding special education; and
4. Score on the Graduate Record Examination (GRE) Aptitude Test. A score of 900 or above is preferred. This requirement is waived for applications holding a graduate degree.

Additional Admission Requirements for Non-Education Majors Seeking MR, SLD, or BD certification must:

In addition to the general admission requirements stated above, non-education majors seeking K-12 MR, SLD, or BD certification must:

1. Take and pass the Pre-Professional Skills Test (PPST) before enrolling in any special education certification coursework. The PPSt is waived upon documentation from a

BEST COPY AVAILABLE

single test administration of the American College Testing Program (ACT) composite score of 25 or above, an enhanced ACT score of 26 or above, or a scholastic Achievement Test score of 1035. The PPST is waived for individuals with a graduate degree.

2. Complete the following prerequisite courses with a GPA of 3.25 before beginning special education certification coursework:

Ed. 500	-	Survey: Introduction, History and Philosophy of Education	3 hrs.
Ed. 516	-	Human Development	3 hrs.
Rdng. 525	-	Psychological Foundations of Reading	3 hrs.
Sp. Ed. 507	-	Introduction to Consultative Collaboration	1 hr.
Sp. Ed. 508	-	Mentorship and Effective Teaching	1 hr.
Sp. Ed. 509	-	Transition: Planning and Implementation	1 hr.

3. Take and pass the state Multi-Subjects Content Specialization test (K-8) during the first six hours of certification coursework in Special Education.

Multiple criteria are used in arriving at a decision to admit students to the special education program. Each applicant is evaluated with reference to the following criteria: GRE scores, letters of recommendation, quality of content and written expression in the personal statement, undergraduate grade point average, and performance on graduate courses completed. Flexibility is maintained in the application of the criteria to individual cases through the use of a weighting scale.

If the applicant's weighted score falls below the acceptable minimum for admission as a degree or professional development student, the student may be eligible for provisional enrollment. A student who is on provisional status must take nine (9) hours of specified coursework with a GPA of 3.25 and then reapply for admission as a professional development student. Further, a student admitted as a professional development student may reapply for admission as a degree student if he/she completes all certification requirements with an overall GPA of 3.25.

DEGREE REQUIREMENTS

Each degree program includes all certification work for one of the specializations. Degree students follow a planned program of study and must maintain a cumulative grade point average of 3.0. Degree students are required to plan and implement an original research study in their area of specialization. Students must also pass a written comprehensive examination.

PROGRAM OF STUDIES
MASTER'S DEGREE IN SPECIAL EDUCATION

A master's degree may be earned with a specialization in one of three areas: Behavior Disorders, Mental Retardation or Specific Learning Disabilities. Students are responsible for checking all course descriptions for prerequisites.

BEST COPY AVAILABLE

Program Requirements for BD, MR, and SLD

Core Courses Required in BD. MR and SLD* 12 hrs.

Sp. Ed. 500	Introduction to Special Education
Sp. Ed. 550	Assessment in Special Education
Sp. Ed. 553	General Program Planning for Exceptional Children
Ed. 501	Seminar: Educational Research

Certification Area Specific Courses* 9 hrs.

Learning Disabilities

Sp. Ed. 504	Characteristics and Etiology - LD
Sp. Ed. 561	Program Planning/Implementation - LD
Sp. Ed. 610	Field Experience - LD

Behavior Disorders

Sp. Ed. 503	Characteristics and Etiology - BD
Sp. Ed. 556	Program Planning/Implementation - BD
Sp. Ed. 611	Field Experience - BD

Mental Retardation

Sp. Ed. 501	Characteristics and Etiology - MR
Sp. Ed. 559	Program Planning and Implementation - MR
Sp. Ed. 609	Field Experience - MR

Required Degree Courses 18 hrs.

Sp. Ed. 601	Sp. Ed. Research, Part I (3 hours)
Sp. Ed. 602	Sp. Ed. Research, Part II (3 hours)

Approved Electives (12 hours)

Total Hours for Degree 39 hrs.

*Students must complete 12 hours of core courses and 9 hours of certification area specialization course to obtain initial certification in each area. Additional endorsements may be added with the completion of the 7 - 9 hours of certification areas specific courses.

ADDITIONAL CERTIFICATION REQUIREMENTS

All Special Education majors must take the Content Specialization test in the area(s) in which they seek endorsement, i.e., BD, SLD., and MR. The Special Education Content Specialization Test is taken at the end of the certification coursework in Special Education.

Students

This alternative program was initiated in the 1986-87 academic year. Since that time, 116 students from non-traditional backgrounds have sought admission to the program. The average student was 34.6 years of age, had two children and was otherwise fully employed. Only five students attended classes on a full-time basis. Additionally, these students were drawn from 33 of the state's 55 counties.

Course delivery

Delivery of coursework is always a challenge for an institution which has a "campus bound", a variety of techniques have been utilized to service rural students. Traditionally, the institution has relied heavily on a cadre of carefully selected adjunct faculty who join full-time faculty in traveling to one of the seven "distant" sites. In addition, both audio-only and video-teleconferencing (with audio bridge) are utilized to link distant sites with professors. To date, identification of cohort groups formed to participate in the preliminary block of coursework has been only partially implemented due to the geographic dispersion of these non-traditional students. Finally, a variety of alternative class meeting schedules have been developed to fit the nature of some coursework or a particular group of students.

Results

Students who participate in this alternative program typically have three competency tests to master in addition to coursework and prior to receiving a recommendation for certification. The special education program has utilized competency tests developed by the State Department of Education via contract with National Evaluation Systems for this purpose. The first is the Preprofessional Skills Test (PPST) which measures basic skills in the areas of mathematics, reading and writing. This test is waived for applicants with acceptable performance levels on either the ACT (25) or an SAT score of 1035 or for those holding a graduate degree. Results thus far are summarized in Table 1.

TABLE 1

NUMBER OF EXAMINEES AND PASS RATES FOR PPST BY INSTITUTION AND STATE

	Institution (alternative program)	State
Number of Examinees	41	9346
Examinee Pass Rate (%)	90.2	92.3

The second competency test was the Multi-Subject Test (Grades K-8). This test was typically required by students exiting four year early/middle childhood (K-8) teacher preparation programs. An underlying assumption of all K-12 special education certification programs described earlier is that the non-traditional student will be able to demonstrate those skills by successfully completing this test. Results to date are summarized in Table 2.

BEST COPY AVAILABLE

TABLE 2

NUMBER OF EXAMINEES AND PASS RATES FOR MST (K-8) BY INSTITUTION AND STATE

	Institution (alternative program)	State
Number of Examinees	78	3114
Percent Passing	87.2	92.1

Having successfully mastered the first two competency test requirements, the student is eligible to complete the remaining certification coursework, the clinically supervised practicum and the final exceptionality-specific (SLD, BD or MR) competency test required for certification. Results to date are summarized in Table 3.

TABLE 3

NUMBER OF EXAMINEES AND PASS RATES FOR SP. ED. COMPETENCY TESTS BY INSTITUTION AND STATE

	Institution (alternative program)	State
Number of Examinees	66	1248
Pass Rate (%)	98.5	96.4

The basic premise for the development of the alternative program was that attracting quality adults from non-education backgrounds might have a stabilizing effect on retention rates of special educators in rural settings. The following summary table describes the results of a follow-up study which tracked the retention rates for students completing the program.

TABLE 4

RETENTION RATES FOR ALTERNATIVE PROGRAM (SUMMARY)

Total Number Licensed	62	
Number initially employed in-state	55	(88.7%)
Number currently employed in-state	49	(79.0%)
Number employed in system originally hiring	43	(69.4%)

Discussion

Of a total of 116 students from non-traditional backgrounds who have sought special education licensure through this alternative route, 62 have completed all certification requirements. It is important to note the effect of the succession of competency testing requirements upon the terminal licensure testing success ratios for the alternative program. On the surface, it appears that these screens have successfully filtered the applicants for desirable qualities and potential as is evident in the high success rate for those at the final competency determination level of testing. One limitation of the study (and one that bears further investigation) is the fact that the competency testing utilized specify minimum competency levels rather than more advanced performance standards.

"States report that more than 20,000 people have been licensed through alternative certification programs since 1985" (National Center for Education Information, 1993). It is the belief of this writer that those students who have completed this alternative certification track meet the most important performance criterion of being "safe to practice", a standard proposed by Williamson et al. in 1985. Because the turnover rate for these special educators was significantly diminished, one more puzzle piece may be added in the effort to serve special needs students in rural settings.

BEST COPY AVAILABLE

REFERENCES

Feistritzer, E., & Chester, D. (1995). Alternative teacher certification: A state-by-state analysis. National Center for Education Information, Washington, D.C.

Koff, R., Florio, D., & Cronin, J.M. (1976). Illinois policy project: Accreditation,certification, and continuing education. (Task Force Reports). Springfield, IL: State Office of Education; Chicago, IL: Roosevelt University. (ERC Document Reproduction Service No. ED 128 346).

Marockie, H.R. (1986-96). Annual report: Supply/demand of educational personnel. West Virginia Department of Education, pp. 38-101.

Marockie, H.R. (1996). Fifth annual report on personnel preparation test results. West Virginia Department of Education, pp. 13-30.

Smith, D.C., Nystrand, R., Ruch, C., Gideonse, H., & Carlson, K. (1985). Alternative certification: A position statement of AACTE. Journal of Teacher Education, 36(3), 24.

Williamson, J.L., Backman, C., Guy, M., Kay, P., & Turley, J. (1985). Emergency teacher certification: Summary and recommendations. Journal of Teacher Education, 35(2), 21-25.

Frank C. Renew
RENEW ASSOCIATES
Penacook, New Hampshire

Educating Students with PDD/Autism: The Case for Rational Inclusion

Introduction

Three issues have been identified by Simpson (1995) as having "a significant effect on the education of children with autism: (a) a willingness to accept and rely upon unproven and controversial interventions, (b) the advisability of full-time placement of students in general education settings, and (c) the preparation of adequately trained personnel to educate students with autism." This list can be expanded to contain "doctrinaire views of school inclusion". Planning and implementing services for students diagnosed with PDD/Autism (Pervasive Developmental Delay /Autism) often results in friction among team members. Splits between parents and school staff or between differing camps of school staff members are common. These splits commonly occur along predictable fault lines related to themes such as "use of structure/medications", "assessing progress", "curriculum elements", and "school inclusion". These splits have significant impacts on the development of IEP related services, evaluating student progress, and the erosion of trust among team members. Since these factors in turn affect resource allocation (i.e. budget), they have grave implications for rural school districts struggling to serve a most difficult population of students. The cases of two students from different school districts will be examined to illustrate these splits, their origins, and suggestions for amelioration.

Case Studies

Student Profile - JP

JP is a 6 year old boy variously diagnosed with Severe Developmental Delays, PDD, or mental retardation who lives with his single mother. He exhibits no expressive language other than saying "mama". He shows scant evidence of receptive language beyond responding to his name and a few one word instructions(e.g. "sit", "stop", "eat") which are often repeated 3-4 times before he initiates the task. He is a visually oriented child who can often imitate one to two step activities which are either modeled or demonstrated for him with hand-over-hand techniques. His social repertoire is grossly immature, limited to gazing and smiling at a 1:1 teacher or parent, listening to oral reading or stories, being tickled, or allowing someone to squeeze his head. He is dependent on mother or teachers for hygiene and activities of daily living. His physical development and strength are increasingly an obstacle for all his service providers, two of whom are often needed to manage him.

Service Profile

After conducting a thorough evaluation, his pediatric neurologist recommended that JP be placed in a highly structured residential school. This recommendation was based on the doctor's recognition of JP's severe delays in development and subsequent service needs which he felt would be difficult for JP's mother to provide. While admitting that caring for JP and his younger sister was difficult, JP's mother found this alternative unacceptable. She cried whenever the topic was mentioned. JP's tantrums and uncooperative behaviors at home were so disruptive that she requested and received psychotropic medications from the doctor to render JP more manageable.

The urban school district, having recently set up a day program for students diagnosed with PDD/Autism, was eager to accept JP. The school program provides a range of classroom activities, speech, OT, and physical therapies and home-based family support components geared to students diagnosed with PDD/Autism and their families. The classroom teacher is well trained and experienced in teaching these students. She makes every effort to use a "data based" approach to making classroom decisions. The classroom teaching assistants have little education beyond the high school level and no prior experience of a technical nature regarding education generally, let alone the complexities of teaching students with complex learning or behavioral needs. Their classroom teaching approaches reflect their personal view of parenting. Some approach each teaching situation as an opportunity to hug the student or fulfill a perceived emotional need. Others react to each situation as an opportunity to demonstrate that they will not "give in" to a student's misbehavior. The classroom teacher provides ongoing training and supervision as time permits.

Congruence and Conflicts

1. Structure/Medications. The physician continues to prescribe a range of medications as behavior management agents based on the mother's description of JP's unruly behavior. This coincides with her need to alleviate the pressures on the household. The teacher struggles with the behavioral side effects of each new medication regimen (e.g. hyperactivity, drowsiness) and the problems they pose to JP's attention, learning, and cooperation skills. The teacher's attempts to send classroom behavioral data to the doctor, as feedback on the side effects of each medication emerge, have been rejected.

2. Assessing Progress. The teacher instructs her assistants to observe and collect classroom data relevant to JP's learning progress and disruptive behaviors (e.g. tantrums, naps). The mother is unable to collect data and is mistrustful of how it will be used. Each of the classroom assistants vary in their application of teaching techniques, use of reinforcement and punishment, and data recording. Data assessment does not permit distinctions between changes in JP's behavior which may be due to changes in techniques, staff persons, medications, or other factors. The doctor continues to make treatment decisions without consulting with school personnel.

3. Curriculum. JP's teachers and mother design an IEP that emphasizes the development of communication, self help, and behavior management skills. The mother cannot attend training sessions and is reluctant to have home visitors. Each time JP's behavior becomes problematic, his mother approaches the doctor for increases or changes in his medications. As the new medications take effect, JP shifts from drowsy to hyperactive or vice versa. As his behavior patterns shift, the classroom teacher abandons old strategies for new ones. Sometimes the medications cause JP to show different patterns of behavior in the home and school settings. It

may take two months or more before the teacher and the mother can reach agreement to approach the doctor again. In the meanwhile, assessing JP's progress in any particular skill area has become even more difficult.

Conflicts

The predisposition of JP's doctor towards residential school placement created an emotional rift with JP's mother and a treatment rift with the school staff. JP's mother is concerned about how sending her young son to a residential school might affect him or her relationship with him. She is also concerned about what others will think about her if she sends her son away. So JP remains close to his mother and sister in a very unstructured home where he receives psychotropic medications which interfere with his attending, learning, communication, and memory skills.

Assessing JP's progress is made difficult by the various teaching styles, medications, and communication gaps among his providers. His mother is afraid that if she collects behavioral data, it will reflect on her as a mother or worse, be used as a basis for sending her son away.

The classroom staff work together at a general level on JP's communication, self help, and behavior management skills. On a more careful examination differences in each person's understanding of PDD/Autism, the importance of measurement, or their individual notions of school inclusion seems to affect the efficacy of teaching approaches. The school district adhering to its own version of "school inclusion" has created a program for **all** PDD/Autistic students. This program is in a public school building but is largely isolated from other students. The program relies on 1:1 teaching assistants but does not adequately train them. Sending a student to an (expensive) out of district placement is not easily done within current district inclusion guidelines. At team meetings each participant has trouble weighing suggestions on their merit rather than on the predisposition of the person making the suggestion.

Student Profile - BW

BW is an alert, verbal 5 year old boy diagnosed with PDD. He lives in a suburban rural community with his parents and an older brother. He is highly verbal, social, and attentive. There are elements of stereotypy, ritual, and decalage in all his repertoires but he does not present significant behavior problems or seizures. He was diagnosed at three years of age and has received educationally related services since then. For the past two years BW has been a day student at a highly structured behaviorally oriented facility specializing in teaching students with autism and severe behavior management problems. Parents and teachers agree that BW made tremendous progress his first 11/2 years at the special school. The family has become increasingly concerned about BW's social skill development.

Service Profile

For 11/2 years BW made progress in a highly structured behaviorally oriented facility. The school district has strong commitment to school inclusion for most students but seems relieved to have a specialized program near by to serve students with complex needs. As long as the parents are satisfied, the school district would rather send these students out than retrain teachers or make other modifications that they feel might be necessary to mainstream these students. School district personnel in this quiet, rural, well ordered town are very concerned about the possibility of reactions from parents of other students to any odd or disruptive behaviors BW might exhibit. They ask," Don't all students have the right to feel safe in the classroom?". The parents feel that the private facility is an isolated setting which does not provide age appropriate roll models or a chance for real peer acceptance for BW. Ironically, the staff at the behaviorally oriented facility feel that BW should stay with them a bit longer, but do not offer any measurable criteria for assessing the change in placement.

Congruence and Conflicts

1. Structure/Medications. BW has enjoyed the benefits of a highly structured data driven program for almost two years. The family wishes to begin fading BW into a typical classroom, but the school district is not anxious to make the necessary accommodations just as the private facility is not anxious to let go.

2. Assessing Progress. There is no disagreement on the progress BW has made towards his learning objectives at the private facility. There is also no disagreement among those concerned that much of the progress is due to the highly structured data driven procedures used at the facility. It is difficult, however to independently assess BW's "meaningful" progress because the staff at the facility determine which data will be shared. Generalization data about BW's performances in other settings or with variants of the target behaviors is not presented to the team. The situation is made more complex by the cult-like closed atmosphere in which the private facility operates. Parents must make appointments well in advance to visit or observe their child. Other family or school hired advocates or consultants are often forbidden to visit except under the most controlled circumstances. The argument of the private facility is that these safeguards are an attempt (in the children's best interest) to protect students from outside disruptions. BW is making progress but who decides the areas of his progress?

3. Curriculum. There are some questions about the appropriateness of BW's learning objectives and about the direction they are leading. If time is critical, is it more important to teach a student to count to a hundred or a thousand, or to teach the student to relate to peers? Obviously both these kinds of objectives are important. But in such a labor intensive teaching situation, where learning relies so much on structured classroom teaching, how are the learning resources to be organized? Each interpretation of "school inclusion" tilts the path in its own direction. How shall numerical data be collected? How will data be used to assess the fading of highly structured techniques?

Conflicts

There are rifts among BW's team members about the appropriateness of BW's learning objectives and the general direction of his IEP goals. There is also a rift over when and how to mainstream BW into the public school community. Each team member offers solutions consistent with their parochial view of educational doctrines. Disparate interpretations of school inclusion are offered as justification for keeping him in a specialized facility and for relocating him to a public school classroom. The parents find themselves disagreeing with both the school district's and the private facility's versions of school inclusion. They are trying to negotiate a gradual approach of introducing BW to a typical classroom which is assessed according to the principles of Applied Behavior Analysis. It is an uphill climb.

School Inclusion and Students Diagnosed with PDD/Autism

Discussion

Until recently, students diagnosed with PDD/Autism were categorically excluded from public schools. According to prevailing educational doctrines, these children were thought to be psychotic. Only since the 1960s have they been viewed as teachable. Lovaas' demonstration (1963) that severely autistic children could learn through highly structured versions of the same methods used with typical children extended not only our view of the abilities of autistic students but of which students could be taught in the public schools. The work of Kozoloff (1971) pushed the boundaries even more by demonstrating that autistic students could succeed in typical classrooms if teachers, curricula, and other components of the learning environment were prepared in precise ways.

The school diversity movement has traversed a parallel course. As our definition of the student population has broadened, students differing in gender, ethnicity, and learning ability have been admitted to the classroom. The success of these students also required modifications in the preparation of teachers, curricula, and components of the learning environment. Relying on placement in the classroom has never been adequate to ensure success of students who differ significantly from their peers. Teaching and assessment approaches which do not make accommodations to fit the receptive and expressive needs of an individual student, become obstacles to that student's educational success. When education professionals are guided by their feelings rather than measurement conflicts arise as in the case of facilitated communication (Bilken,1990; Calculator,1992).

This preeminence of decisions to include diverse students in the classroom, over determinations of how to best teach them, continues to have critical implications for educators, parents, and the students themselves. This dichotomy manifests itself at every level of discussion and planning. Perhaps it is illustrative that justifications to include diverse students seem to originate in ideas about what is morally, legally, or even democratically correct. This could be seen as a doctrinaire approach to school inclusion. Later there is a shift towards the **presumed** benefits for classmates, the community, and the diverse student. Subsequent discussions about how to effectively teach these students address measurement related concepts such as grading, assessing progress, and student productivity almost as an afterthought.

This rift between **belief based** and **measurement based** approaches to planning services for students with diverse abilities now separates groups of former allies in the special education community. One group embraces "inclusion" as a doctrine or an end in itself. This is a doctrinaire view (Stainback,W., and Stainback, S., 1984). In this view, placing students with diverse abilities, even severely handicapping conditions, in the regular classroom is itself the goal. Teacher preparation, social acceptance by peers, classroom modifications are details which can be worked out later. Placing the student in the regular classroom is the measure of success. School districts can be heard claiming that they are successfully fully included on the basis that they have placed a large number of diverse students in regular classrooms.

The other group sees "inclusion" as an ongoing process. In "rational inclusion" the preparation of the teacher, classmates, and other classroom variables are seen as necessary prerequisites to the eventual placement of the student in the regular classroom. While teachers and parents often blur the distinction between these two positions, the differences are significant and are illustrated by the case studies. Individual students with similar diagnoses may require a different array of educational services, each of which may be consistent with "inclusion" for that student. One student may need the high degree of structure specialized facilities offer, another student may not. Both these options should be evaluated on their merits. Too often teams choose one path or the other on the basis of personal preference as if it were an immutable decision. Sometimes team members out of a deep sense of personal conviction, refuse to sign or support the IEP. When the discussion is couched in moral terms of "right or wrong" rather than in a problem solving mode, these outcomes are inevitable. Where there is honest disagreement about IEP decisions team members have difficulty accessing options which resemble compromise. Trial periods and measured progress are two such options.

Conclusion

Too often students with diverse needs (and their classmates), especially those in the first included wave, serve as guinea pigs as we learn how to provide educationally related services to them in the public school. In the best instances, the learning curve of the teachers is steeper than that of the students. In the worst of cases, decisions about placement, service provision, and classroom modifications are driven by factors unrelated to teaching efficacy. Calling this a reactive approach rather than an "On the Job Training (OJT)" approach misses the irony that in these cases the rolls of teacher and student are reversed. While several factors (e.g. teacher preparation, school budgets) likely contribute to this OJT approach, we can do better.

Teacher preparation, often heavily imbued with faculty members theories or doctrines, often sets the stage for the quality of discussions in IEP team meetings. Teachers who are problem solving oriented, are less likely to view issues as "black or white". Team leaders are rarely given the preparation necessary to manage team meetings or to keep the discussion on an even keel. Frequently, the close connection between the team leader and the school administration plants a seed of mistrust before the proceedings begin. More skilled team leaders, more independent team leaders are more likely perceived as trusted team leaders. Active parent advisory groups with access to training and information, are more likely to make informed decisions. they are also more likely to recognize and appreciate the genuine efforts of school staff without suspicion.

Finally, less doctrinaire and more "rational" approaches to defining and implementing school inclusion must be used. Successful school inclusion must stop being measured as a body count of how many students with diversity are in the regular classrooms. Successful school inclusion needs to be measured as a function of each student's academic and social success.

Bibliography

Biklen,D. (1990). Communication unbound: Autism and praxis. Harvard Educational Review, 60,291-314.

Calculator,S.N. (1992). Perhaps the emperor has clothes after all: A response to Biklen. American Journal of Speech and Language Pathology, 1(2), 18-20.

Kozloff, M.A. (1971). The Humanization Processes: a social, behavioral analysis of children's problems. New York, Wiley-Interscience.

Lovaas,I. (1966). Program for the establishment of speech in schizophrenic and autistic children. In J.K. Wing (Ed.), Early childhood autism: Clinical, educational, and social aspects. London: Pergamon Press.

Simpson, R. L. (1995). Children and Youth with Autism in an Age of Reform: a Perspective on Current Issues. Behavior Disorders, 21(1), 7-20.

Stainback,W., and Stainback, S. (1984). A rationale for the merger of regular and special education. Exceptional Children, 51(2), 102-111.

Joe Nolan, Texas A&M -Corpus Christi, Corpus Christi, Tx.
Peter Ellery, University of South Florida, Tampa, Fl.
Paul Maguire, University of Alaska - Anchorage, Anchorage, AK.

PERSPECTIVES ON ADAPTED PHYSICAL EDUCATION SERVICES TO RURAL POPULATIONS

Adapted Physical Education is an instructional area that has emerged as a fundamental education service for children with disabilities in recent years. P.L. 94-142 (Education of the Handicapped Act) supplemented by P.L. 101-476 (Individuals with Disabilities Education Act - IDEA) and amended by P.L. 105-17 (amended IDEA of 1997) clearly outline Physical Education as a subject that must be provided to anyone receiving a "free appropriate public education".

The trend of inclusion further necessitates the need for the services of an Adapted Physical Educator. This becomes evident when one considers that the first attempt at inclusion usually occurs in physical education (Ryan, 1994). The Adapted Physical Educator is required to serve as the "resource" teacher in the gym.

A response heard from many administrators in rural areas to the question of whether or not they have access to an Adapted Physical Educator is that they have been including for years. It should be noted that inclusion is not just placing the child in the gym as a manager or scorekeeper. The purpose of inclusion is to place the child in the regular education environment with all needed supports (Block, 1994). It is common experience for districts that do not have access to an Adapted Physical Educator to be concerned about A.P.E. only when the threat of litigation is looming. Therefore, it is reasonable to assume that inclusion for the most part is not being implemented correctly in Physical Education.

The purpose of this paper is to give a national overview of Adapted Physical Education, and present perspectives on A.P.E. in rural areas of three states. Representing the East will be Florida, the Central area will be represented by Texas, and the West by Alaska. These states were chosen because of their large rural area.

Nationally, 15 states have a certification or endorsement in Adapted Physical Education. They are: California, Florida, Indiana, Louisiana, Maine, Michigan, Minnesota, Nebraska, Nevada, North Dakota, Ohio, Oregon, Rhode Island, Wisconsin, and Wyoming. South Dakota and Texas have endorsements under consideration. Arkansas and Kansas each had certifications but eliminated them due to the fact that so few people applied. West Virginia once had a dual certification for physical educators working with children with Physical Disabilities. However, this has been absorbed into the regular physical education certification (Nolan, 1998). All states offer at least one course in Adapted Physical Education at the undergraduate level, a few offer a undergraduate minor in A.P.E. New York, Indiana, and California are examples. Undergraduate majors in A.P.E. are scarce. However, there are a great number of graduate programs offering majors in Adapted Physical Education. Despite the availability of university personnel for consultation, many school districts and states still ignore A.P.E. as a valid instructional area or view the service as frivolous (Butterfield and Chase, 1990).

An Eastern state perspective - Florida

Florida is one of the few states that has a strong emphasis on Adapted Physical Education within Physical Education. Florida has two university programs that train adapted physical education teachers at the master's degree level. In fact, the program at the University of South Florida has received federal funding in this area for over 25 years. There is a state certification and many of the teachers complete their graduate studies in this area. Last year, however, this certification and the value of adapted physical education began to be called into question at the state legislative level. Some legislators attempted to have the certification removed, allowing any teacher to work in physical education with students who have disabilities. This has met with strong resistance from the county teachers and superintendents as well as the universities involved in adapted physical education teacher preparation. Over the past year, both the University of South Florida and the University of Florida have surveyed graduates of the certification process and the coursework received by the students in this process. Results from this survey have indicated an overwhelming support for the certification process and the value of course work that is covered in the program.

The University of South Florida is one of the few federally funded adapted physical education teacher preparation programs that receives funding for summer in-service instruction. The certification coursework is offered in one week blocks where teachers come and receive information related to that certification subject area from 8:00 am until 5:00 pm each day. The method of coursework delivery was designed specifically to take into account teachers from remote rural areas. The work is intensive but this method seems to be more acceptable to teachers from around the state who come in for three weeks to take the classes and then go back to the county they live and teach in. A stipend for these teachers is offered as part of the federal funding, and this helps offset the cost of accommodation and living away from home for this period. While the program does have a large number of teachers that come in from rural counties, most counties are close enough that participants in the summer certification program are able to travel home on weekends.

Although it varies from school district to school district, most individuals completing a masters degree in adapted physical education are employed as district consultants while teachers completing the certification process usually stay as regular physical education teachers that have classes that include students with disabilities. Consultants usually work on an intinerant basis and visit students once a week. Programs are developed with the existing teacher (who is hopefully certified in adapted physical education) and the existing teacher then pursues the program in the physical education classes that the consultant does not attend. In rural districts, this is especially important as travel distance often limits the number of times that the adapted physical education consultant can visit, and most of the instruction and programming does fall on the shoulders of the school physical education teacher.

While it is true that adapted physical education is strong among teachers in the state of Florida, there are still many teachers in many rural counties that are not certified to teach students with disabilities with appropriate physical education programs. In these schools, many students with disabilities are "dumped" into inclusive instructional settings. Most of these physical education teachers argue that distance to appropriate training programs and the cost of taking these courses away from home prohibits them from becoming certified.

In an attempt to bridge this issue, the University of South Florida is working in technology to provide distance education models, materials and media that take the in-service instruction needed to the teachers in these rural locations. The School of Physical Education, Wellness and Sport Studies at the University of South Florida has already developed a laser disc program for instructing teachers on how to evaluate basic gross motor skill movement, and is currently engaged in developing a digital video disc entitled "Physical Activity For All", which will show teachers how to work with children who have disabilities and how to effectively integrate them into regular physical education classes. The University has also developed, and is currently testing, a computer program that will allow physical education teachers to learn basic sign language related to physical education. The program covers about 150 signs that are related to movement and sport and provides both instruction and testing opportunities on a compact disc that can be played on most personal computers. It is hoped that these programs when completed will be distributed to rural areas so that teachers can receive instruction via this technology when distance and cost makes direct instruction not viable.

Finally, the university is working on expanding its distance education capabilities through the School of Physical Education, Wellness and Sport Studies internet server. The server currently provides information on physical education programs in many of the counties in Florida, information related to legislation and the State Department of Education, professional information on physical education related web sites and physical education associations. The site can be accessed at the following world wide web address:

http://pe.coedu.usf.edu/

It is hoped that, in time, much of the coursework being offered as part of the certification requirement in adapted physical education will be offered over the internet in distance learning coursework that can be accessed either at school, or even in the teachers own time at home. The adapted physical education certification program is still very important to Florida's education system and teachers, and we wish to give every teacher in Florida the opportunity to receive training in it.

A Central state perspective - Texas

Since the enactment of P.L. 94-142, proponents of Adapted Physical Education in the state have lobbied to initiate a certification or endorsement in the field. It appears, that after twenty five years, an endorsement has a chance of passage. The necessity of a state endorsement is strong due to the shortage of Adapted Physical Educators in the state. In the last Comprehensive System of Personnel Development (CSPD) report that included special physical educators, need was projected at 300 positions. The last Adapted Physical Education National Standards (APENS) examination yielded 15 certified Adapted Physical Educators. All of the 15 are located in or near metropolitan areas. An analysis of the Texas Association of Health, Physical Education, Recreation and Dance membership indicated that 80 of 3574 members have Adapted Physical Education as their primary interest area.

The problem has increased with the thrust of the regular education initiative in public schools (Will, 1986) A major concern occurs when students with disabilities enter into classes and are taught by teachers or paraprofessionals who do not know the unique characteristics of these learners (Frey & Sandford, 1996) including medical considerations that relate to activity contraindications. During a recent in-service for physical education paraprofessionals the audience was asked if they had been trained for the occurrence of seizures. Not one of the 70 attendees answered in the affirmative. This lack of training increases the possibility of educational malpractice (Rich, 1973).

The employment of Adapted Physical Educators is confined mainly to the major metropolitan areas. Rural school districts in North Texas are serviced by contract with either graduates or doctoral students of Texas Woman's University. TWU has had federally funded personnel preparation programs in Adapted Physical Education for over 20 years. The rural school districts in the other areas, however, are not so fortunate.

To alleviate the shortage in the South Texas area, Texas A&M University - Corpus Christi has taken a different approach to personnel preparation. In response to the trend of inclusion and the shortage of teachers qualified to teach classes containing children with disabilities, TAMUCC has proposed a personnel preparation program that would educate regular physical educators for the inclusive environment. This project will bring physical education paraprofessionals back to complete their degrees in Adapted Physical Education. This will be the only undergraduate personnel preparation program of its kind in the country. In four years, it will put a APE qualified physical educator at every school district in a 11 county area of the coastal bend of South Texas. Additionally, graduate personnel preparation programs are being initiated at Texas A&M - College Station and Texas Tech University. Finally, collaborative distance learning projects and internet courses are being planned by Texas Woman's University and Texas A&M - Corpus Christi to update the skills of regular physical educators who entered the field before the onset of inclusion.

A Western state perspective - Alaska

Introduction - The State of Alaska's Health: The state of Alaska is experiencing a health crisis of epidemic proportions. For example, The Youth Risk Behavior Survey (YRBS) Data for Alaska (1997) indicate:

A.) 82% of all deaths for children and youth ages 5-24 are due to injuries (e.g. motor vehicle crashes, homicide, suicide, and other unintentional injuries).
B.) Alaskans of all ages have one of the highest suicide rates in the U.S. (Alaska: 23.6/100,000; U.S.: 11.2/100,000).
C.) 58% of middle school students have tried smoking at least once.
D.) 67% of middle school students report ever having had a drink of alcohol; 20% report ever having used inhalants; and 26% report ever having used marijuana.
E.) 32.2% of 14 year olds report having had sexual intercourse at least once.
F.) 34% of middle school girls describe themselves as overweight; 57.8% of girls are trying to lose weight.

Alaska invests most of it's resources into treatment. Very few resources are allocated to developing Comprehensive School Health Education (CSHE) programs. With the enculturated value by the dominant culture in our state being best described as "avoidance", underrepresented groups such as Native Alaskans and people with disabilities have received little attention regarding their health school health enhancement needs.

Health, Outdoor, and Physical Education (HOPE) Program at UAA: The HOPE program at UAA is the only personnel preparation program in health, outdoor, and physical education in Alaska. The program currently offers a B.Ed. in Health, Outdoor, and Physical Education with a teaching endorsement in physical education. Given the identified health crisis, the small number of HOPE faculty (3.0 FTE), dwindling resources, and a climate of complacency and fervor in protecting the Permanent Fund, infusing issues relative to adapted physical education throughout the curriculum is the most efficient approach to professional preparation for the HOPE program.

Adapted Physical Education at the DOE and at UAA: The Department of Education (DOE) will accept a declared undergraduate or masters degree in adapted physical education from the lower 48 for credentialing in APE. In many districts the inappropriate notion that adapted physical education is a related service has been adopted. For example, the Anchorage School District houses it's APE team in related services with PT and OT. Advocacy by HOPE faculty has failed to change this situation.

At present, HOPE faculty are advocating for the adoption of a fifth year MAT model with an endorsement in physical education. This degree will be linked to the B.Ed. and allow us to "stack" our audience (e.g. undergraduate and graduate combined), so that student enrollment will support the coursework. The MAT model will allow our students to participate in a full year internship, including working with students who experience ability and ethnic diversity. Our approach with developing CSHE coursework and curriculum, including physical education, is to address student diversity within an ability, ethnic, culture, and gender context. The emphasis of the curriculum is on a health enhancement model which includes content, themes and strands such as creating behavior change, health and wellness issues for people with disabilities, and culturally determined movement alternatives for Alaska Natives, Hispanic/Latinos, Asian-Pacific Islanders... etc. Alaskans need to appreciate that school is an appropriate place to develop the values, knowledge, and skills needed to make healthy choices.

Summary

The information presented in this paper is only a thumbnail sketch of the state of APE in rural areas of the United States. Although only 15 states have certification or endorsement, the advent of the Adapted Physical Education National Standards (APENS) examination has produced many exceptional nationally certified Adapted Physical Educators in 21 additional states. There are many universities that offer Adapted Physical Education courses, at least on the introductory level. These universities have personnel qualified to consult on APE matters, assess children with motor problems and implement APE programs at the district level. Information on Nationally Certified Adapted Physical Educators can be found in the conference handout and at the APENS website mentioned earlier in this paper. Information on personnel preparation programs can be obtained from the Office of Special Education Research (OSERS) at the U.S. Department of Education. The resources exist to provide quality adapted physical education services to children in rural areas. The key is to network and collaborate to find the most cost effective way to provide those services. We hope this collaborative presentation sparked an interest in the reader to further pursue those avenues.

REFERENCES

Block, M. E. (1994). Why all students with disabilities should be included in Regular Physical Education. Palaestra 10. (3) 17-24.

Butterfield S. A., & Chase, J. (1990). Rural Adapted Physical Education: An inservice training approach. Palaestra. 7. (1). 49-51.

Frey, G. & Sandford, S. (1996, December). :Inclusion in Texas schools; Current status and future directions. Presented at the 73rd annual TAHPERD Convention, Corpus Christi, Tx.

Nolan, J. E. (in press). Certification update. Active Voice.

Rich, J. E. (1993). Adapted physical education standards: Counterpart response. Palaestra.10.(1) 36-39, 41.

Ryan, D. F. (1994). Inclusion: the key to success. Proceedings of the Annual National Conference of the American Council on Rural Special Education (ACRES, Austin, Tx, 14.

Will, M. (1986). Educating students with learning problems in a shared responsibility. Washington. D.C., Office of Special Education and Rehabilitative Services, U.S. Department of Education.

Nancy Montgomery
Speech-Language Pathologist
University of Kansas
Kansas City, Kansas
montn@eagle.cc.ukans.edu

Cindy Griffiths
Teacher of the Deaf
Olathe District Schools
Olathe, Kansas
tlgriffiths@msn.com

LANGUAGE DEVELOPMENT THROUGH STORY RETELLING DOCUMENTED BY SIX TRAIT WRITING ANALYSIS

Students who are deaf/hard of hearing have traditionally experienced great difficulty developing literacy skills. The research supports that students who are proficient readers are those who have engaged in cognitively-challenging conversations with teachers at school. In addition to these conversations, educators teach the analysis of characters, events, problem resolution and discussions of meaning of vocabulary, multiple meanings, figurative language and inferencing; all of which are challenging skills for readers who are deaf/hard of hearing.

The presenters completed a two year research project that examined spoken (signed) and written retells of texts. The authors analyzed the text structures of the student's retells and tracked the development of word structures, syntax, length of the retells, noun-verb agreement, new vocabulary, and the grammatical complexity of utterances. The results of the study indicated that effective teaching that integrates literacy skills in a nurturing communicative environment positively impacts student learning. The authors also utilized the six trait writing analysis to carefully assess written retells of text and formulate goals facilitating the writing process. Results also indicated that students who are deaf/hard of hearing are capable of comprehending complex basal and instructional texts utilized in the general education classroom without watering down the content of the stories. The authors were pleased to see the results of the student's ability to master complex, as well as simple stories.

Facilitation Strategies

How do I facilitate writing skills?
- Begin by having students write about the story to give them something concrete to write about instead of having to generate their own topics.
- Encourage students to draw pictures to accompany their writing.
- Ask questions to follow up their writing.
- Tell the student you are confused when the flow of the writing does not make sense. This also teaches students the ability to paraphrase.
- Utilize the six trait writing analysis to build on their writing skills.
- Remember, this is a long term process.
- Utilize peer editing to improve a student's written product.

How do I facilitate reading skills?
- Do an interactive daily read aloud with the students.
- Discuss the story, emphasizing the text structure or the beginning, middle, and end of the story.
- Encourage students to use context clues and picture clues to decode an unknown word.
- Utilize a graphic organizer to insure complete comprehension of the story.
- Summarize the main ideas of the story and identify the solution.
- Facilitate vocabulary development through the use of a personal dictionary for each child. Add sections to this dictionary for multiple meaning words, figurative language, synonyms & antonyms, and inferences from the story, as well as classroom discussion.
- Have the students re-read the story.
- Incorporate a response activity related to the story. This may consist of student-generated illustrations or acting out the story, or field trip.
- Using the graphic organizer, the student would write a retell of the story on blank, lined paper.
- The teacher of the deaf would choose to target one specific text structure from the following: appropriate introduction, introduction of main characters, mention of the setting, inclusion of events, solution to the problem, appropriate conclusion.
- Encourage the students to make text-to-life applications and enjoy further recreational reading.

How do I facilitate speech and audition skills?
- Integrate speech and listening goals into each story.
- Encourage students to use voicing when they retell the story.
- Arrange for the student to retell the story to younger hearing children, using good speech skills.
- Videotape the student telling the story.
- Incorporate phonological skills when sounding out unfamiliar words.
- Incorporate articulation goals into the retell of the story.
- Utilize a listening screen to ask comprehension questions about the story.

How do I build my students' confidence in their literacy skills?
- Don't expect perfection.
- Build on the strengths of each student.
- Highlight their work in portfolio folders.

How do I integrate conversation?
- Discuss elements of the story such as the problem and the solution.
- Highlight text-to-life examples that directly apply to the students.

Why is addressing conversational skills important?
- It encourages a student to organize his thoughts and to convey a coherent thought.
- Allows the teacher to emphasize sequencing the events in the story. Sequencing skills will then transfer to students retelling events happening in their lives.

BEST COPY AVAILABLE

Modifications to Tests

* Reorganize test questions from easy to difficult.
* Enlarge or highlight key words in a question or phrase.
* Assist students in pacing themselves by showing or telling how much time remains.
* Provide oral directions for each portion of the test.
* Underline the word "Directions" on the test to call attention to it.
* Give a take-home test.
* Give tests more frequently, covering less content per test.
* Change the response format to short answer or fill in blank.
* Avoid long and wordy questions.
* Eliminate the need to transfer answers from the test to another piece of paper.
* Avoid using words such as not, never, always, except.
* Color code the sections of the test.
* Allow the student the option of drawing a line from the question to the correct multiple choice.
* Avoid the use of all of the above, some of the above, none of the above.
* Place all matching items and choices on the same page.
* Use small groups of matching questions and choices.
* Provide a word bank of possible answers for fill in the blank questions.
* When using essay question, pre-teach the meaning of compare, describe, discuss.
* Allow outlining as an option to writing an essay.
* Provide opportunities for students to answer essay questions using a computer.
* Give students the option of adding and answering one one question to the test.
* Allow students one question in each section to choose to skip.

Typical Methods of Modifying Academic Tasks

(derived in part, Hawthorne, p. 151)

- Reduce the number of problems on a page (e.g. five problems to a page); the student may be required to do four pages of work throughout the day is necessary.
- Remove pages from workbooks or reading material and present these to the student one at a time rather than allowing the student to become anxious with workbooks or texts.
- Outline reading material for the student at his/her reading level, emphasizing main ideas.
- Tape record material for the student to listen to as he/she reads along.
- Read tests/quizzes for the student.
- Tape record tests/quizzes for the student.
- Make a bright construction paper border for the student to place around reading material in order to maintain his/her attention to the task.
- Make a reading window from construction paper which the student places over sentences or paragraphs in order to maintain attention.
- Provide manipulative objects for the student to use in solving math problems.

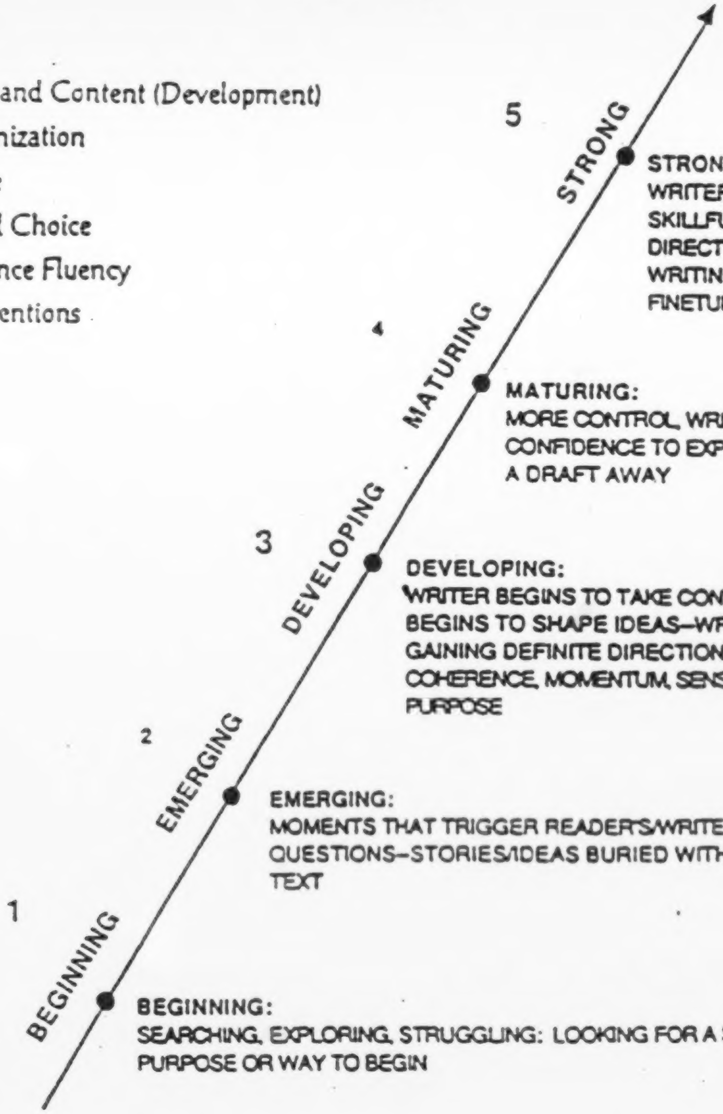
-B-

- Rearrange problems on a page(e.g., if crowded, create more space between problems).
- Use graph paper for math problems, handwriting, etc.
- Rewrite directions at a more appropriate reading level.
- Tape record directions.
- Have peers deliver directions or explanations.
- Allow more time to take tests or quizzes.
- Use quick reference math guide.
- Use mnemonic devices to teach math facts.
- Provide same curriculum at a lower level.
- Have student take test one day using book, next day without.
- Have student take notes then trade his copy for your copy.
- Give student guided notes partially filled in.

ANALYTICAL TRAIT SCORING GUIDE

(Rubric)

- Ideas and Content (Development)
- Organization
- Voice
- Word Choice
- Sentence Fluency
- Conventions



STRONG:
WRITER IN CONTROL–SKILLFULLY SHAPING AND DIRECTING THE WRITING–EVIDENCE OF FINETUNING

MATURING:
MORE CONTROL, WRITER HAS CONFIDENCE TO EXPERIMENT–ABOUT A DRAFT AWAY

DEVELOPING:
WRITER BEGINS TO TAKE CONTROL, BEGINS TO SHAPE IDEAS–WRITING GAINING DEFINITE DIRECTION, COHERENCE, MOMENTUM, SENSE OF PURPOSE

EMERGING:
MOMENTS THAT TRIGGER READER'S/WRITER'S QUESTIONS–STORIES/IDEAS BURIED WITHIN THE TEXT

BEGINNING:
SEARCHING, EXPLORING, STRUGGLING: LOOKING FOR A SENSE OF PURPOSE OR WAY TO BEGIN

Developed by Vicki Spandel and Ruth Culham of the Northwest Regional Educational Laboratory, June ,1993. This scoring guide is an updated version of the one that appears in Spandel and Stiggins, *Creating Writers*. Addison-Wesley: 1990. The original guide was developed by teachers from the Beaverton, Oregon School District in 1984. The Laboratory gratefully acknowledges the contributions of the more than 10,000 teachers and students whose shared insights and comments are reflected in this revision.

BEST COPY AVAILABLE

My Writing	
1. **Ideas** • Is my message clear? • Do I have enough information?	2. **Organization** • Does my paper have a good beginning and ending? • Have I told my ideas in the best order?
3. **Voice** • Does this writing sound like me? • Did I say what I truly felt?	3. **Word Choice** • Will my reader understand my words? • Have I used any words I love?
4. **Sentence Fluency** • Do my sentences begin in different ways? • Are some sentences long and some short?	6. **Writing Conventions** • Do I have paragraphs? • Are my words spelled correctly? • Do I use periods and question marks? • Did I use capital letters in the right places?

Developed by Vicki Spandel and Ruth Culham of the Northwest Regional Educational Laboratory, June ,1993. This scoring guide is an updated version of the one that appears in Spandel and Stiggins, *Creating Writers*. Addison-Wesley: 1990. The original guide was developed by teachers from the Beaverton, Oregon School District in 1984. The Laboratory gratefully acknowledges the contributions of the more than 10,000 teachers and students whose shared insights and comments are reflected in this revision.

BEST COPY AVAILABLE

Jakupcak, Ed.D., Jo
The University of Montana
Rural Institute on Disabilities
Missoula, MT 59812

Fishbaugh, Ed.D., Mary Susan
Montana State University-Billings
Director, Office of Professional Practices
Billings, MT 59101

A HORSE OF A DIFFERENT COLOR
DISTANCE EDUCATION; MAKING IT EFFECTIVE

INTRODUCTION

Distance education is a horse of a different color. It is still education, but it does not make a good teacher better, nor can it make a poor teacher adequate. It does call for specific strategies to make it a more viable option for the delivery of pre- and in-service training opportunities for educators and others in the field of disabilities. It is a new tool that benefits from the use of techniques both on camera and off.

Distance education takes many forms. In a sense, colleges and universities have always provided education to individuals who do not have ready access to a campus through the format of correspondence courses. Today many technologies exist that that can deliver information and provide vital interactive links among individuals who work in the field of disabilities. Telecommunications forms include: satellite broadcasts, CD ROM access to data base on ERIC, electronic bulletin boards, fiber optic and telephone line delivery of teleconferences around a topic (Miller, Hull, & Nelson, 1991). In rural areas, these systems of delivery for training opportunities is doubly important. Issues of geographic distance and professional isolation render individuals incapable of maintaining skills in rapidly changing fields. A shortage of specialists to provide the training opportunities is coupled with the difficulty of finding time and resources to support individuals to travel to campus sites for instruction (Wallace & Weatherman, 1995). For the purposes of this article, distance education will refer to interactive video presentations and courses of study delivered via interactive video telecommunication.

The actual technology used is not the focus of this article; however, it is pertinent to note some differences and issues that arise due to the choice of a telecommunication system. The three in use in many rural states are telephone linkage, end-to-end fiber optic digital transmission, and satellite broadcasts. Depending upon the system available, isolated rural communities experience a wide range of transmission quality. Telephone lines may be subject to interruptions due to bad weather. Some systems experience a time lapse, resulting in the awkward pause after a presenter speaks before the audience receives the information. This is particularly embarrassing when a presenter has just attempted to lighten a presentation with a joke! Fiber optic and satellite delivered systems are clear and delivered in real time; however, due to cost of installation, many remote schools do not yet have access to these facilities.

A key ingredient to a successful telecommunication system in a rural state appears to be a unified initial choice of a single means of delivery. One rural midwestern state, Iowa, chose a fiber optic network in 1993. Today Iowa educators offer courses and workshops on a wide variety of topics to each of Iowa's 99 counties. Every person in Iowa is within 20 minutes of an Iowa Communications Network user site (ICN, 1993). In contrast, the state of Montana has all three systems available. The drawback is that it is cumbersome and expensive to link one type of delivery system to another. Scheduling difficulties may also present problems. Hence, staff members may have a satellite downlink in their local school library, but be forced to travel several hours to a user site in a larger town because the broadcast of a specific topic is over a different system. Given the vast geographical distances and extremes of weather and road conditions in Montana, this inability to readily access programming is unfortunate. Both states demonstrate the power of partnerships between local and state education agencies, university and college systems, and community entities.

In spite of the difficulties posed by various systems of delivery, telecommunications hold promise for drawing together individuals for the purpose of pre- and in-service training in rural states. Distance education gives access to those individuals in a rural area who have specific expertise to share. It allows paraeducators, educators, and others to access resources without leaving their local or regional neighborhood, and it allows for networking with peers. It has the potential of reducing professional isolation. It provides professional growth opportunities when college credit or state renewal units of credit are afforded. When these needs are addressed, staff retention may be positively impacted (Miller, Hull, & Nelson, 1991. p.4).

MAKING DISTANCE EDUCATION EFFECTIVE

Effective use of Distance Education can help rural areas span distances, reducing a sense of isolation in rural teachers, and can prove an economical solution for continued professional development. Resources of time and money can be conserved by bringing the students together at central sites to receive statewide broadcasts. Making these electronic classes fresh and relevant, with timely topics, keeps teachers in isolated rural communities abreast of educators in all parts of the country. Specific strategies are suggested for pre-broadcast activities, broadcast practices, and post-broadcast follow-up responses. Program evaluation is a key component to success.

PRE-BROADCAST ACTIVITIES

Whether a single day workshop or a series of semester or multi-year long course work format is chosen, careful planning is essential. There are many aspects of preparation to be followed. Issues of scheduling, announcing the availability of the training, and materials preparation and delivery all need to be considered.

The instructor is often the individual responsible for contacting the broadcasting system to set up times and dates for broadcasts. Plan on investigating potential dates as soon as possible; scheduling conflicts are common. Consider the potential body of participants. When may the majority have time for training? Confer with administrators to determine whether broadcasts during the workday or in evening or weekend time slots will reach more individuals. Clarify costs for the entire time period chosen. Some sites allow for arrival of the users 15 minutes prior to broadcast; others schedule presentations back-to-back, allowing little time to get set up before broadcast begins. Some systems provide an on-site technician who manages cameras, videos, and unforeseen emergencies while other systems expect the instructor to have received enough training prior to broadcast to perform these functions. Often, the sending site where the instructor is situated, may have a technician available while the receiving sites across a state may not have. A common situation in Montana is a collaborative use of educational networks, telemedicine networks, and a telepsychiatry network, brought together by use of a video network bridge. Understandably, this type broadcast may prove more costly than one delivered over a single network.

The instructor will need to provide clear communication with regard to the date, time, and place where the broadcast is available. Content description must be complete enough to attract potential participants. Avenues to disperse the information must be sought. Does your state have an electronic bulletin board or other readily available way to advertise training opportunities? Are there statewide publications that will fulfill this function? Do you need to prepare and disseminate flyers that announce the training opportunity? Explore the Office of Public Instruction and state Comprehensive System of Personnel Development (CSPD) structures to get the word out about training options. If yours is a college or university-sponsored course, the offices of Continuing Education or of the cooperating department may have campus-based means of advertising a course.

Finally, but most importantly, prepare the presentation itself. Have a clear idea of your purpose, the learner outcomes sought, and good teaching practices. Create a syllabus and follow it. Expect planning time for distance learning to equal two classroom preps. Take the time to develop visual aids that will enhance instruction. Consider the overheads. Use size 20 or larger type and put no more than 5 items on a page. It can be deadening for participants to sit in a far-off site, staring at a TV monitor for an hour or more; remember the interactive nature of the medium and use it to its fullest. Use of PowerPoint, slides, and video clips keep the presentation from becoming a "talking heads" session. Check for clarity of reception; fuzzy videos are unacceptable. Plan for student-led activities, cooperative learning projects that bring sites together, and assignments that promote discussion (Paulek, 1997).

Prepare and disseminate appropriate information packets, worksheets, and agendas well ahead of the broadcast date. Presenters may provide a single packet to a local group leader or facilitator for copying and distribution at the time of broadcast. Others work through an individual registration process and send a complete materials packet to each enrolled individual. Advance preparation of team worksheets has been found to be an effective device to encourage collaboration at the various sites during broadcast time.

BROADCAST PRACTICES

Welcome each site and identify a respondent or group facilitator who will take roll, encourage active participation, and oversee use of the microphones to interact from the site. Establish ground rules for the session. For many participants, this will be an initiation into telecommunications, so a brief demonstration of use of the microphone, mention of the distracting influence of sidebar remarks, and instructions concerning such housekeeping details as handing in homework, are all in order. Agree upon set times for breaks before the formal presentation begins.

The instructor needs to be familiar with the equipment. Rustling papers, covering the microphone, failure to be aware of the camera, and checking for audio or visual difficulties, especially when showing a video, are all points to consider. Let the participants see your sense of humor. Adopt as natural a manner as possible. Remember that everything takes longer over distance education. Slow down and be patient. Check frequently with the participants to be certain instructions are understood when individual or group tasks are given.

While the expense of broadcast or "air" time may incline presenters to fill the entire time slot with information-giving, all that is known about adult learners encourages the use of 1/3 to 1/2 of the broadcast time for interaction among the participants at user sites and between user sites (Wolfe, 1993). To this end, address the entire group of participants as though it is a single class. If at all possible, plan to broadcast from each user site over the span of semester-long courses. Any efforts on the part of the instructor to visit the various sites at least once during the course will serve to draw the group together and provide the human face-to-face contact otherwise missing from distance education (Jakupcak, 1997).

Use a list of receiving sites to be certain that each site is participating. Invite them into discussions with thoughtful questions that will engage the participants. While it is a good idea to follow some routine that is consistent from session to session, be certain that you vary the activities within each hour. This is particularly true of sessions that are 3 or 4 hours in length. Employ a variety of opportunities for participants to interact with one another. Working with new information immediately after hearing it is an effective way to positively impact retention of the information and promote application of it. Use of a simple structure will often prompt greater group participation. Here are a few to try:

1. Pair and Share Strategy is a two minute technique. It asks one partner to quietly share a one minute summary of the main idea just presented, then for the

second person to add details for one minute. A variation is for the second person to imagine an application of the main idea in a specific work situation.

2. PMI is a worksheet with 3 columns headed Positive, Minus, and Interesting. In groups of 3 or 4, participants spend a brief time reviewing information just presented and listing it under one of the three headings.

3. Problems-Solutions is a T-chart with 2 columns, one headed Problems, the second , Solutions. Small groups list problems encountered at their local work site and then choose a solution to try from the information just presented.

A word about non-verbal communication is in order. Eighty per cent of a message is non-verbal; stay positive with regard to facial expressions. Smile, nod, then transition with words: I see what you mean. Have you thought of it in this way? Keep your body language positive. It can be disheartening for a student to be responding from one site only to see the camera come back on an instructor whose facial or body language indicates that attention was wandering.

Have a means to call a group back to order after a work session or discussion period. Some instructors have done this with flair, using musical instruments or children's toys that produce a pleasant, distinctive sound. Others clap or use voice to reconvene the larger group. Advance notice about the method being used will save time during the broadcast.

The final point for an effective broadcast is to evaluate after each session and to use the participant input for the next broadcast. If the distance education format is long-term, such as a semester or more in length, also evaluate the entire educational program. Consider mechanics of the broadcast, participants' comfort, and amenities at the facility as well as the content and means of presenting information. If the instruction is a series of workshops, make evaluation comments available to participants before the following session and mention the changes made in response to suggestions. Instructor response bridges the distance that is part and parcel of telecommunication. Acknowledgment is a powerful tool with all learners, but especially with adult learners.

POST-BROADCAST FOLLOW-UP

The excitement of the broadcast is over. The technician signals that the time has expired and the instructor gathers materials and leaves the broadcast site. The work is not over, though. Time after a single broadcast or between two or more sessions, presents an opportunity to forge a closer bond that shortens the distance in Distance Education. Mail promised materials as soon as possible. Grade papers and comment on assignments before the next broadcast. A response to a question posed on-air may be answered by mailing an appropriate article to that participant, a phoned response lets a questioner know that he or she was heard, and there is time for reflection on the part of the instructor before the next broadcast.

Read and use evaluation comments. This is the primary avenue of communication between presenter and participant; it deserves careful consideration. Even when the situation mentioned is beyond the control of the instructor, e.g., the roads were icy, or the seats in the user site are hard. These comments serve to bind a group together and can become a source of humor and familiarity. Acknowledgment lets participants know that they have been heard. Response indicates concern for them.

Planning for the next session begins. Based on what the instructor has learned from evaluation feedback, continuous improvement can be built in. Make the needed adjustments to the next presentation and repeat the cycle. As one educator remarked after his first course via telecommunications, "You will never again work this hard or enjoy teaching as much!"

TWO SUCCESSFUL PROGRAMS IN A RURAL STATE

Montana Cohort Program is a two-year Master's Degree in Curriculum and Instruction offered through The University of Montana, Missoula, Montana. Its first efforts involved a group of 30 graduate level students from Helena, Montana who were interested in earning a Masters of Education Degree. All were actively teaching and did not feel that they had the time to travel the 120 miles to Missoula to attend courses on campus. The School of Education's Department of Curriculum and Instruction was solicited by the cohort student group to provide the coursework using an intra-state Metnet service via a telephone system that linked a Missoula classroom to a classroom at the Helena College of Technology. Students attended one six-hour evening per week for two fall and two spring semesters and an intensive 4-week block during the intervening summer. Unique features of this program included:

1. Enrollment as a cohort group with all students enrolling at the same time and taking the same sequence of coursework;

2. Periodic on-site visitation to supplement the regular distance learning sessions;

3. Utilization of e-mail as a source of communication between students and faculty;

4. Access to electronic library resources via a statewide library network linking university and state governmental resources (Helena is state capitol of Montana).

The success of the Montana Distance Learning Master's Degree Program was due to the following factors:

1. The students were highly motivated; indeed, they solicited the delivery of the program at their local site;

2. The students were seasoned professionals who developed a sense of camaraderie and group identity over the two years they shared classes, a cadre of professors, comprehensive examinations, and a novel learning experience (novel for students *and* faculty);

3. Faculty volunteered for this teaching assignment and could choose the assignment as part of their regular teaching load or as an over-load duty;

4. Technical support was available during each session. Lightning strikes and snowstorms provided some "off-camera" glitches, but these were typically overcome in a matter of minutes;

5. A sense of pioneering effort characterized the connection between students and faculty. This served as a bond to promote the learning community that was geographically separated;

6. Use of a variety of teaching strategies including traditional video, overheads, guest speakers, collaborative projects and assignments that were based upon actual school and student problems maintained interest and involvement;

7. A stance of informality combined with a recognition of the technical barriers that might have disrupted dialogue and visual displays developed a sense of shared responsibility for the success of each class meeting and for the success of the class over the semester (Jakupcak, 1997).

Plans are underway for the Montana Cohort Program to expand its efforts to other sites around the state.

The second project, Montana Training for Inclusive Education (TIE) is a federally-funded project in its fourth year of a five-year grant period. It brings together 9 or 10 teams of 6 or more persons each year to receive training in and develop a strategic plan for implementing inclusive education for students with identified special education needs. To date, 47 teams have been trained. These teams represent a cross-section of Montana schools, from large city districts such as Billings, to tiny districts with only one special educator serving students K-12 in towns like Ekalaka. Team membership must include an administrator, a general educator, a special educator, a paraeducator, a related service provider, and a parent of a child with a disability.

The annual plan for TIE Training begins with a two-day, face-to-face conference in a central location. This serves as a kick-off for the involvement of school teams. They network with other teams from across the state, learn about the goals and objectives for their two-year commitment to TIE, and begin teaming activities. Following initial trainging, they meet once per month for five one-day Distance Learning broadcasts at their nearest user site on the Metnet System. By the fifth broadcast, each team has developed a strategic action plan for implementing more inclusive practices at their local site. During the second year of the program each team has access to a small financial stipend and to an inclusion consultant for support. This program has been highly successful in effecting school change. Some of the reasons for its success are:

1. The make-up of the local team and attention to site-specific problems;

2. The attention to issues of communication, team-building exercises, and conflict resolution;

3. The use of former teams as mentors to new teams and as resources within their own local buildings;

4. The use of presenters with national, state, and local information and insights;

5. The provision of a cadre of trained inclusion consultants, one of whom attaches to a specific team each year, guiding them through the change process and facilitating each Metnet broadcast on site; and

6. The use of on-going formative and summative evaluation measures to ensure constant improvement of the program.

CONCLUSION

Distance education is a horse of a different color. It has the potential to increase training and networking opportunities in rural states. It may decrease the sense of isolation among rural special educators and direct service personnel. It may have a positive impact on retention of persons in needed areas. It is evident that the principles of good educational practice remain in effect when using telecommunication. Specific attempts to personalize the delivery of new information and to foster the learning and subsequent use of that information must be utilized. Distance education is here to stay; how well it is implemented will determine whether this becomes one of the stronger "horses" in our stable of pre-service and in-service delivery modes.

REFERENCES

Jakupcak, M. (1997). The Montana Cohort Master's Degree Program Report. Unpublished report. Department of Curriculum & Instruction, The School of Education, The University of Montana. Missoula, MT

Miller, B., Hull, J., & Nelson, S. (1991) Overcoming Professional Isolation in Small, Rural Schools. Northwest Regional Laboratory. Portland. OR

Paulek, D. (1997). Tips for Teaching Interactive Video Courses. Unpublished report. Indian Hills Community College. Ottumwa, IA

Wallace, T. & Weatherman, D. (1995). Distance Education: Training Service Providers in the Information Age. Impact. Institute on Community Integration. University of Minnesota. Minneapolis, MN 8, 2 pp 1-19.

Wolfe, B. (1993) Inservices That Teach and Transform. Presentation. University of Wisconsin-Eau Claire. WI

Dr. Jamie B. Lewis
Dr. Kathleen Bennett deMarrais
Dr. Greg Prater
and the NAU Research Team*
Northern Arizona University
Flagstaff, AZ 86011-5774

Teaching Navajo Bilingual Special Education Students: Challenges and Strategies

Students from culturally diverse backgrounds often experience difficulty when they enter classrooms across America due to

> cultural differences that are reflected in their learning styles, learning preferences, and classroom behaviors. These differences predispose students from culturally diverse backgrounds to failure in traditional classrooms that have not been designed to accommodate their strengths and needs. Consequently, these students are at greater risk of being referred and placed in special education programs (Voltz, 1995, p. 1).

This risk is often compounded when the student is from a Native American background. As the following statistics indicate, the remoteness and isolation of Native American populations across the United States have created a situation in which this group is often a forgotten minority.

***1.4 million Native Americans live on reservations.**

***A significant percentage of Native Americans live in rural areas.**

***300,000 to 400,000 of Native Americans are school age.**

***85 to 95% of Native American children are educated in Public Schools.**

***Only 1% of the teachers in the United States are Native American.**

***Special Education services on reservations are rarely provided by Native American people.**

***In 1989, the high school dropout rate for Native Americans was 36%.**

Although attention has been placed upon multicultural education in recent years,

> one of the perspectives that [still] requires representation in today's curriculum is that of the Native American. Native Americans are unique among ethnic and multicultural groups as our only native peoples. Critical research on Native American children is limited or unavailable (Holiday, Bitseedy and Russell, 1995, p. 50)

The curriculum in the public schools across America is saturated with the structure and practices of dominant culture, therefore, when a Navajo child begins attending school they are

> suddenly plunged into a totally unfamiliar environment. The child is unprepared for the classroom. The child may have the desire to learn, but as an unfamiliar environment, the school soon begins to eat away at his or her sense of freedom, independence and pride. The life that once had balance is now perceived as a standard of living that is not acceptable to the dominant culture. The child is no longer empowered (Ibid., p. 51).

Often this lack of familiarity with the way we "do school" (Bennett deMarrais and LeCompte, 1995) results in the children being identified as special education students. Robin (a current education major at Northern Arizona University) describes her experience in the following account:

> While I was at the boarding school, I started from the first grade. I did not know how to read nor speak the English language. My teacher labeled me as LD (learning disabled), so I attended classes with Special Education students. I had no friends because they thought that I was crazy. Therefore, I struggled through school, and I did not have much support from anyone (not even my teacher).

The plight of the Navajo student in a special education class is also impacted by the fact "that a very small number of special education teachers working in Navajo schools (are) Navajo" (Delaney-Barmann, Prater and Miner, in press, p. 3). Lancaster (1994) found that since Navajo special education teachers were in high demand, there was a high turnover rate because they were often able to move to better paying positions at other schools on the reservation.

The purpose of this study was to examine the experiences of three special education teachers who currently work on the Navajo reservation in northeastern Arizona. In this study we explored the challenges faced by these teachers as well as the strategies they use when working with Navajo bilingual special education students. Finally, we suggest alternatives to schooling as a means of affirming the Navajo culture and as a means of providing an education which is culturally relevant to Native American students.

Context of Study

This study was conducted at Cedar Elementary school in Cedar, Arizona. Cedar, a very remote community located on the Navajo reservation, is nestled between First Mesa, Second Mesa and Black Mesa and offers spectacular views of the sun rising and setting on the surrounding mesas. It is approximately 30 miles northeast of Second Mesa, which is on the Hopi reservation and 45 miles southwest of Chinle and Canyon de Chelly, a sacred place for the Navajos. It is a community which has strong ties to the Navajo culture and traditions. Navajo is the primary language among the elders of this community and approximately 80 to 85% of the students attending Cedar Elementary school speak Navajo as their first language. With the exception of one two lane paved road, Cedar is accessible only by dirt road. During inclement weather, this leaves only one means of access into and out of Cedar. By paved road, Cedar is about a four hour drive from the main campus of NAU in Flagstaff, Arizona. If the weather is pleasant, alternate routes over several miles of dirt road reduces the travel time to two and a half hours. The Cedar Unified School District, the Navajo Nation, Bashas (a chain of grocery stores throughout Arizona) and traditional artistic endeavors such as sandpainting, silversmithing and weaving are the main sources of employment.

Methodology

The qualitative research team for this study were both faculty and undergraduate preservice teachers who are currently participating in an elementary/special education program located on the Navajo reservation. This program is a joint venture between Northern Arizona University (NAU) and the Cedar Unified School District (CUSD). This study used interviews to explore the ways three special education teachers work with their students. The challenges which these teachers encounter when working with Navajo bilingual special education students were examined, especially as these factors relate to the language barriers and lack of university coursework which specifically prepares teachers to work with Native American special education students. This paper examines the strategies which these teachers have found to be successful when working with Navajo special education students. The undergraduate students were part of the research team for this study and were responsible for collecting the data. Since this is the first time these students conducted interviews, they were not as in-depth as interviews conducted by more experienced qualitative researchers. The undergraduate students, with the assistance of their university professors, analyzed the data thematically providing rich, detailed descriptions of the teaching of these special education teachers. Several themes emerged from the interview data which provide insight regarding the challenges and strategies used by these teachers in their special education classrooms. These themes are:

1. Understanding language differences:
    - Variation in familiarity among teachers [and students] with Navajo language
    - Limited teacher preparation for working with bilingual special education Navajo students
    - Confusion with the influence of language and its impact on special education placement

2. Strategies for working with bilingual special education Navajo students:
   - Attempting a variety of forms of communication to try to reach the students
   - Using extrinsic and intrinsic awards to motivate students
   - Direct communication with students and parents about school expectations
   - Creating a structured and comfortable learning environment
   - Using task analysis to break down tasks into specific steps
   - Using a variety of "hands-on" approaches

Participants

The participants in this study elementary and middle schools teachers who work in a small rural community located on the Navajo Nation with Navajo bilingual, special education students. Pseudonyms are used for the teachers as a means of preserving their anonymity.

Brad

Brad is an Anglo teacher who has been employed by the district for three years. He works in the middle school. His area of expertise lies in gifted education, but he is currently working with special education students in the middle school. Brad believes that one of his roles as a teacher is to motivate students to learn. He uses rewards, games and other extrinsic strategies to get students interested in learning activities. The student interviewer describes this teacher as "concerned about his students and about finding ways to meet their educational needs."

Martha

Martha is a Navajo teacher who was originally hired as a guidance counselor for the elementary school, but now serves as a special education teacher there. She has taken master's level coursework that includes some special education coursework. She has an emergency special education certificate from the State of Arizona. This is Martha's first year as an employee of the school district. Martha believes that many of the children come from homes that are unstructured and believes her role is to provide a structured environment so that students learn. The student interviewer describes this teacher as "soft spoken and concerned about her students and their education."

Rose

Rose is an Anglo teacher currently in her first year as an elementary teacher in the district. Her educational background is in special education. Although she thinks that behavior modification is important for many of her students, she also responds to her student's needs based upon what she learns from them. She believes that students should be motivated intrinsically rather than extrinsically. The student interviewer describes this teacher as an individual who "learns from her students and finds ways to adapt to their educational needs."

At first glance these teachers may seem drastically different in terms of the ways they approach teaching and their students. However, the interviews with these teachers revealed several similarities in their experiences. None of these teachers have had much education regarding Navajo culture and/or its use in classroom. Like many educators, their schooling did not address the special nature of working with bilingual students, the research around second language learners, multicultural education, or problematizing the culture of schooling for minority students. All of the participants are struggling to do the best they can in a school setting that is very different from their own educational experiences and they are all trying a variety of approaches and hoping for the best for their children

Understanding language differences

Variation in familiarity Navajo language

All three teachers identified language as a barrier to their work with the students. Since approximately 90-95% of the students they work with enter school speaking only Navajo, the language barrier presents itself in two ways: (1)Navajo students have limited English proficiency and (2)Anglo teachers speak English only--they are not familiar with Navajo. Rose finds this to be her biggest challenge.

> I think that biggest challenge is not being familiar enough with their language to understand them when they tell me something. Especially when language is an issue anyway. A lot of the kids come to school and don't speak English or Navajo very well. And if you can speak both languages, you can understand them better than I can. In some ways though...it's probably better for the kids because they've been forced to speak English then. Sometimes when you have to use it you acquire it faster. But it's been hard because I learned how to speak some German and the sounds are so different. I keep getting that confused with Navajo, so I have to stop. But that's

BEST COPY AVAILABLE

> been the hardest...is being able to understand them and them being able to understand me.

This is a challenge not only for the teachers, but also for the students. Martha, who is a Native speaker of Navajo agrees that "the challenges that I face working in with Navajo bilingual students (is the students') ... lack of experience with ... or lack of proficient English."

Limited preparation for working with bilingual special education Navajo students

Traditional university programs often fail to focus upon the infusion of bilingual education with special education primarily because they "are not designed to meet the needs of the reservation" (Baca and Miramontes, 1985, p. 43). As a result many of the teachers who work with bilingual populations are unfamiliar with the strategies and techniques used with bilingual students. It was clear from the interviews with the three teachers that they had a limited knowledge base to support their work with the children in their classrooms. None of the teachers we interviewed had pre-service or in-service education related to working with bilingual children. Rose discovered that only through trying different methods of communication with her students was she beginning to realize some successful communication:

> Well, I think the biggest reward is realizing that I can communicate in a lot of other ways than with language because I had to learn how to explain things to kids whether it was using sign language or body language or lots of other things. Thinking about where I could picture things to show the kids or working with the puppets, you know any of those things and so, while it's been a language issue for them it's really been...I've learned that communication takes place in a lot more ways than just verbal.

Rose was left to her own devices to develop communication strategies with her Navajo speakers. She had little in the way of support systems for this work.

Confusion with the influence of language and its impact on special education placement

Since a majority of the teachers who work at this school are Anglo and therefore unfamiliar with the Navajo language, difficulties with the English language are often mistaken for learning disabilities. As a result, students must pay the consequences because like Robin (in the above quote) they are misidentified as needing special education services until they are proficient in English. When discussing her students, Martha states that "two of them are English proficient and back in the classroom." The teachers we interviewed seemed to confuse the limited English proficiency with the special education needs of the students in their classrooms. In fact, several times teachers mentioned that when the children had become more proficient in English, they were moved from the special education classroom. The teachers seemed to be unclear as to when a child was having language difficulties and when a child was experiencing any of a variety of learning disabilities.

Strategies for working with bilingual special education Navajo students

Direct Communication with Students and Parents about School Expectations

One of the strategies that each of these teachers used was to communicate directly with students and/or their parents regarding their expectations for the students. Rose states, "We talked a lot about bringing in homework and the importance of it." She also talks about how at one point students in her reading group "asked to be able to make (flashcards) for the next week. And at that point I decided that sometimes kids do know more of what they need." Martha describes the following process she uses with a student:

> Everyday we sit and we talk with him. We ask him questions. Trying to help him to talk so that we can start working some of the words out of picture cards. It's really knowing where the kids are and then trying to build them up with [experiences in both languages].

Brad discusses how he tries to build self esteem and also how he tries to emphasis the importance of an education to the students' lives.

> That's a real problem, especially among special ed kids - - is a very low self esteem ... a low image of themselves, especially at middle school. Actually that's one thing that we try to work on. Give lots of praise and pats on the back, things like that to try and get them to work.

BEST COPY AVAILABLE

> I've had a kid that came into my reading class from another class. He would just sit there and not do anything and it took me a while to get him. And, it was involving his parents to work with him. It was showing him that it was important - - it was going to be important for the rest of his life. And he started making improvements and working a little bit harder and his writing became a little bit better, but it took a lot of work. And now he's ... we've mainstreamed him in all of his classes. He's done real well.

Using Extrinsic and Intrinsic Rewards

These teachers also found that they were able to motivate their students through both extrinsic and intrinsic rewards. Brad primarily uses extrinsic ways of reinforcing children.

> I try all kinds of stuff. I offer them food and candy, cookies, things like that. I try to make it interesting...the material interesting. I modify it to what they can achieve. I try to do fun things. Okay, we work hard all week and Friday we'll have word games or math games or things like that. It's a combination of making it interesting and bribery, a little bit...and then giving them something to strive for...a challenge.

Martha and Rose both try more intrinsic methods to build skills, confidence and self esteem. Rose believes that

> the best strategy that (she's) found is constantly telling them that they are doing a good job and trying to get them comfortable with what their skills are, and try to teach them how to tell themselves that they've done a good job. I try some rewards and in extreme cases they do work because sometimes that is the only thing that will motivate.

Martha agrees,

> I try to build their self esteem, too. That's why I have the mirror there. 'Look in there. Who is that? That is a special person.' And I try to build that in...that you are special because it's not apparent what or who says anything to them.

Creating a Structured and Comfortable Learning Environment

These educators recognized the importance of creating learning environments for their students which were structured. In order to learn, students must feel comfortable and secure. Students must also be provided with an environment in which

> children are encouraged to be creative thinkers, ... make good decisions, and develop values. Emphasis should be placed on providing a structured and facilitative environment through which the students can become self-directed. Learning must come from within the individual through social and individual contexts, with the student encouraged to find the discipline to take learning seriously (Holiday et al, 1995).

Martha believes that structure is important "because I get the impression that they are unsupervised at home. That there's no structure at home...Routines make them feel secure. If they aren't secure, they are going to feel lost and be someplace besides school." The day-to-day structure and routine provides the students with the security and comfort them need in order to learn.

Use of Task Analysis

Often the teachers find that it is helpful to break down the tasks into a step-by-step process. In the following example, Rose discusses how she has found that it is important to break skills up into steps.

> I think that I always started with something they could do first, and then add one step at a time. Like, ...especially in math. For example, the fourth graders are working on doing two and three digit multiplication, and they were trying to remember what the second step is...like in two digit multiplication where you carry it and have to add it. So, what I've done is, I've gone through and had them do the first step on all the problems. So, they go through and multiply the one that's right above it. And after they're done with that for all

BEST COPY AVAILABLE

> of them, then they go back and they do the next one that they have to do at a diagonal. And when they do the same step repeatedly over and over, by the end of the paper they know how to do that second step.

Brad adds, "I have to lay it out for them pretty much. Step one. Step two. But here, I've found that to be true with regular ed kids, too."

Using a Variety of "Hands-on" Approaches

Within the Navajo tradition, children learned through observation and manipulation. For example, a young girl learned how to weave a rug through watching her grandmother and/or grandmother weave and then by actually weaving. As the young girl weaved, she would be under the watchful eyes of the grandmother. When she encountered difficulties, her grandmother would instruct her at the loom by showing her what she had done wrong and by then going through the steps with her once again. "In the curriculum, teachers should use manipulative approaches whenever possible, remembering that not all students' answers will agree with the teacher's answer" (Holiday et al, 1995, p. 53).

We found that one of the strategies that these teachers identified as important was the use of manipulatives and starting where the student was. Martha described the importance of manipulatives in the following statement. "There again, the Navajo kids, they need a lot of hands-on. Manipulatives that they can use and also try to go at their level. Start where they are and build upon that ... instead of saying this is an apple, I have them taste the apple." Through experience, these teachers have learned about the importance of observation and manipulatives. Martha has found it helpful to use

> Pictures...something attractive...sometimes I use things that they can put their hands-on. They want lots of pictures. A lot of times they aren't motivated to write and I try to give them different things they can write on. Sometimes I give them a paintbrush and I have them draw something.

Rose has found it helpful to encourage the students to use pictures in their writing.

> Another thing is to teach them that it is okay to draw pictures instead of writing, and as they get more comfortable with even the drawing...like some kids shut down when it came to journal time because they thought that they had to write...they had to write words. So sometimes, just backing it up a little and allowing them space to do what they can do first makes a big difference.

Even so, one component that was missing in all of these teachers use of hands-on manipulatives was use of culturally relevant examples. For example, "teachers (could) use a known object such as a Navajo basket as the focus to connect the known with the unknown" (Ibid. at 52). If the teacher education programs which these students attended had included an emphasis upon multicultural education, these teachers would have the knowledge they need in order to provide their students with culturally relevant instruction.

Conclusions and Recommendations

All three of these teachers are using the strategies they have developed for working with bilingual, special education Navajo students. Unfortunately, due to their limited knowledge, they are left with little in the way of support systems for the challenges of their classrooms. In the remainder of this paper, we offer recommendations and alternatives ways of doing school and teacher education that would affirming the Navajo culture and provide teachers with the knowledge necessary to offer Native American students with a culturally relevant education. We offer the following recommendations:

1. We believe that there is a need for teacher education programs that addresses these concerns.

There is a need for changes in university programs in terms of the training which they provide to prospective teachers in terms of bilingual, special education and multicultural education. Teacher education programs such as the Piñon Preparation Program (Lewis, 1998) is a good start because it is preparing Navajo teachers elementary and special education teachers. In addition, the elementary methods portion of this program is based upon a social foundations approach and is infused with multicultural education. Future university teacher education programs could build upon the structure of this program by adding a component specifically dealing with bilingual education.

BEST COPY AVAILABLE

This combination of disciplines will provide teachers with the knowledge they need to discern whether a student's difficulties are the result of cultural or language differences or learning disabilities.

In addition, teacher education programs should develop the following areas of knowledge and abilities of teachers:

(1) develop knowledge and understandings of their own cultural backgrounds;
(2) develop knowledge and understandings of minority students;
(3) develop knowledge and understandings of children from impoverished families;
(4) better understand the problems and concerns of children and teachers in rural school settings;
(5) understand the social service programs and agencies involved with the families in the communities in which they will teach;
(6) develop understandings of the structures and policies of rural/Native American schools; and
(7) develop teaching practices appropriate to the education of children in rural/Native American schools.

2. We believe that there is a need for culturally relevant curriculum.

It is important for classrooms to reflect the culture of the students who attend the school. The San Juan public school district has developed the Beauty Way curriculum. The following seven principles not only guide this model, they serve as a way of empowering students and of providing students with a sense of ownership in their education.

1. Being Navajo in itself is not a problem.
2. Growing up and going to school in a non-Indian environment and society is frequently a problem.
3. Navajo children grow up experiencing at least two very different views of the world they live in.
4. Teachers and other school personnel are oblivious to the fact that Native American students undergo traumatic cultural conflicts while going to school.
5. The school must address the traditional issues of the Navajo family.
6. There is a lack of culturally relevant curriculum in schools; the current curriculum does not emphasize what the child already knows.
7. Educators must carefully view Native American students and their educational process from a bilingual and multicultural perspective.

Teachers and school districts which serve Native American populations must continue to find ways to present the curriculum in a way that is culturally relevant. The curriculum should conform to the needs of the children rather than the children conforming to the needs of the curriculum.

3. We believe that teacher's work should be supported through the use of community members and/or bilingual teaching assistants.

One way in which the language barrier could be addressed is to provide the teachers with support either through instruction in the children's first language or through the use of community and/or classroom assistants who are bilingual and who could help to bridge the language gap. These assistants and/or community members may provide knowledge where necessary and appropriate for Anglo teachers.

***The NAU Research Team Consists of the following: Beach, M., Begay, M., Begaye, D., Bitsui, S., Blie, L., Bob, L., Bob, S., Castillo, T., Crank, C., Delmar, B., Denny, V., Dixon, L., Dove, M., Dugi, R., Fuller, D., Gilmore, E., Gonnie, J., Grochowski, J., Hoskie, L., Manygoats, C., Montoya, E., Mullins, J. S., Jim, O., Singer, R., Snyder, M., Webb, R., Zonnie, T.,**

BEST COPY AVAILABLE

References

Baca, L. and O. Miramontes. (1985). Bilingual special education teacher training for American Indians. Journal of American Indian Education, 24(2), 38-47.

Bennett deMarrais and LeCompte. (1995). The way schools work: A sociological analysis of education. N.Y.: Longman Publishers USA.

Delany-Barmann, G., G. Prater and S. Minner. (in press). Preparing Native American special education teachers: Lessons learned from the rural special education project. Rural Special Education Quarterly, Spring 1998.

Lewis, J. and G. Prater. (1998). Piñon Preparation Program (PPP): Meeting the needs of rural Native American students through site-based education programs. Paper presented at the 1998 ACRES Conference.

Holiday, L., W. Bitseedy and G. W. Russell. (1995). Through Navajo eyes: Curriculum guidelines from a teacher's perspective. Multiple voices for ethnically diverse exceptional learners, 1(1), 50-54.

Voltz, D. (1995). Learning and cultural diversities in general and special education classes: Frameworks for success. Multiple voices for ethnically diverse exceptional learners, 1(1), 1-11.

BEST COPY AVAILABLE

Wilfred D. Wienke, Ed.D.
Suzanne M. Martin, Ph.D.
West Virginia University
Jane M. Williams, Ph.D.
Arizona State University West
Robert D. Gilmore, Ph.D.
Office of Special Education Program

THE NEW IDEA: WHAT IS THE IMPACT OF FEDERAL FUNDING ON RURAL PERSONNEL PREPARATION

Introduction

The passage of Public Law 105-16, The Individuals with Disabilities Education Act (IDEA), on June 4, 1997, signaled renewed commitment to professional development of individuals responsible for providing a free appropriate education to infants, toddlers, children and youth with disabilities. Specifically, the State Improvement Grants for children with Disabilities, Subpart 1 of Part D of the Act, national , Activities to Improve Education for children with Disabilities, represents a realization on the part of the federal government that personnel preparation must be a priority for all constituencies dedicated to ensuring improved teaching learning and educational results for all students, including those students with disabilities, and that all parties must be involved in order for that goal to be achieved.

In 1996 the National Council for the Accreditation of Teacher Education (NCATE) suggested that local, state, and federal policies must be aligned in order to have a seamless system of professional development, from recruitment to retention, with effective collaborative partnerships that lead to high standards of teaching and learning. In 1996, the bipartisan National Commission on Teaching and America's Future, in its report "What Matters Most: Teaching for America's Future", cited teacher preparation among a number of deficiencies affecting teaching and learning in America's schools and issued a call to recruit, prepare, and support excellence in teaching in every school. However, the annual Education Week/Pew Charitable Trusts Report on Education in the 50 States issued a report in January, 1997, that indicated Schools of Education in institutions of higher education are not currently producing teachers who are qualified to educate America's children and youth. Moreover a shortage of teachers who are fully certified to teach in their fields continues (Education Week Pew Charitable Trusts, 1998), including a decline in teachers fully certified to teach students with disabilities (Special Education Report. January 21, 1998).

Provisions for individuals with disabilities

Under new provisions in IDEA special education services will take place in large part through collaboration of a variety of professionals and will focus on the general education setting; this is evident in the statue. Providing instruction through inclusive schooling practices has grown at an immense rate in recent years(Wisniewski & Alper, 1994). Compared to other instructional settings, the growth of inclusive schooling has grown more dramatically in rural areas (Capper & Larkin, 1992; Mallory & Berkeley, 1988; Templeman, Frederick, & Udell, 1989). With this growth there is a parallel increase in need for personnel properly prepared to implement such practices. Having highly capable personnel is essential when moving toward implementing an inclusive instructional program (Wisniewski & Alper, 1994). Consequently, the development of instructional programs to properly prepare personnel to implement inclusive schooling practices is absolutely critical (Capper & Larkin, 1992; Sebastian & McDonnell, 1995). This is especially true in rural settings where many resources are restricted and therefore require special approaches to personnel preparation which take advantage of the effective problem solving methods which are already in place (Miller, K. & Wienke, W., 1997).

The recruitment and retention of qualified educational personnel presents major challenges in rural areas. Rural schools find it very difficult to provide training for staff for a variety of reasons: 1) institutions of higher education may be at a great distance and therefore faculty may not be readily available, 2) local personnel are may not be available because of current job demands, and 3) bringing in trainers may be too expensive for the rural district. Ballou & Podgursky (1996) found that schools in rural areas are more likely on average to have on their staff personnel with fewer years of experience, fewer hours of advanced training and fewer advanced degrees. Hence, if it is desirable to employ personnel with higher levels of qualification to provide appropriate services for individuals with disabilities, it seems logical that different personnel recruitment and retention strategies, from those currently employed for rural personnel, need to be utilized. To accomplish this change, a renewed focus on rural education with appropriate resources is needed.

The degree of emphasis on Rural Education, including Special Education, by the U.S. Department of Education, is in general, due to a convergence of interest by the President, the Secretary of Education, the Congress and consumers. Currently, with this convergence of all four groups, there is a high degree of emphasis on rural education nationally that is not only reflected internally through policy and programs but also externally through proclamations and public support. To the extent that there is not a convergence of interest, there will be a lesser degree of emphasis on the educational needs of rural communities, with lesser visibility. This is necessarily so since three of the factors, viz., the Administration, Congress and the Secretary of Education are subject to change through re-election or appointment. New administrations have new priorities as do newly elected congress persons.

The Office of Special Education Programs and Rural Special Education.

The Office of Special Education Programs identified the need to meet the challenge to assure that special education personnel were properly prepared to serve students with disabilities in rural environs. It exerted its leadership by responding with a rural initiative throughout government by creating a special competition in 1985 for the preservice training of personnel to work in rural areas. Applicants to this competition were to address the unique aspects of providing services to special populations in rural areas. Training curricula were to be designed to teach students about local community systems and encourage understanding of interdisciplinary models of service delivery which are consistent with local community values. Issues of recruitment and retention were to be addressed innovatively and creatively. Cooperation and coordination with parent groups, community agencies, public and private schools and other significant agencies and organization were requirements. The competition realized its goals. New model rural programs were developed, rural courses were created, non-traditional students became the norm and many small 'rural' universities and colleges applied and were funded that previously either did not apply or applied and were not funded. Even the larger universities that submitted applications were from rural States.

A new funding approach

With the reauthorization of IDEA came the establishment of a new system of competitive state grants designed to assist state educational agencies and all other learning community members, to reform and improve their educational systems. Professional development, teacher preparation, early intervention, transitions services and dissemination of best practices are but a few of the activities these grants need to support. The intent, since the legislation requires 75 percent of the funds received be used for personnel preparation, is to improve the results for children and youth with disabilities based on the states needs, not perceived national needs. How will this plan be implemented? In the past, personnel preparation grant money was distributed under numerous separate discretionary programs to institutes of higher education and focused on pre-service teacher education even when some states stated in-service preparation as their greatest need. Additionally, an identified focus is the need to prepare teachers to integrate all children in the general education classroom.

A major shift in the new IDEA is the way in which the personnel preparation money will be distributed. The need for better teacher education programs remains but the way in which this need will be met is uncertain. A number of major provisions in the reauthorized IDEA carry far reaching implications. One such provision is the inclusion of general education teachers in the education of all students. The reauthorization of IDEA added several IEP provisions which involve many instructional implications for teacher educators and practitioners and may require extra attention in rural settings. Teacher educators must ensure that practitioners possess the skills necessary to: 1) assess behavior, 2) incorporate cognitive problems solving skills, 3) utilize conflict resolution and peer mediation strategies, and 4) design and implement school wide behavioral management programs. In rural settings, additional resources such as crisis intervention personnel, social work services, psychological services, counseling services, and parent counseling and training services may not be readily accessible (Ludlow, B.L. & Berkeley, T.R., 1991). A new structure for teacher education programs must include assurances that teachers and teacher educators are aware of and knowledgeable in using these wrap-around services as needed. This will require a renewed collaborative effort among all stakeholders to design and implement effective personnel preparation programs for all those who are responsible for and serve individuals with disabilities and their families.

Implications

As previously stated, the educational personnel needs of rural communities are quite different than the educational needs of urban or suburban educational communities. We know that federal funding in these rural areas has major, positive impact. The implications for teacher educators as posed by the reauthorization of the IDEA also will have a major impact on the educational needs of rural communities. Recruitment and retention of highly qualified education personnel for these areas requires further research and discussion. Many questions need to be answered. Some of these questions are posed for future study.

1. How will the state improvement grants provision of IDEA be implemented in rural areas?
2. Are rural State Education Agencies prepared to request and implement state improvement grants?
3. What infrastructures are in place in rural communities to effectively deal with the recruitment and retention of highly qualified educational personnel?
4. How can parents in rural states become involved in the state improvement grant enterprise?
5. Who is monitoring the long term impact of the new IDEA on programs in rural states?
6. What effect will the new IDEA have on the training capacities of rural institutions of higher education?
7. Are the needs for personnel training being better met by provisions of the new IDEA?

References

Author. (1998, January 21). Special Education Report, Alexandria, Virginia: Capitol Publications

Berkeley, T.R., & Ludlow, B.L. (1991). Meeting the needs of special student populations in rural locales. In R.P. Brimm & D.L. Hanson (eds.), The small school: How can it succeed? NASSP Bulletin, 64, 18-26.

Capper,C.A., & Larkin, J. (1992). The regular education initiative: Educational reorganization for rural school districts. Journal of School Leadership, 2, 232-245.

Individuals with Disabilities Education Act, Public Law 105. (October 22, 1997). Federal Register:, 62(204), 1-219.

Mallory, B., & Berkeley, T. (1988). The relationship between rural characteristics and the preparation of early childhood educators. Rural Special Education Quarterly,7, 1-5.

Miller,K. & Wienke, W. (1997). Training rural general educators to serve students with learning disabilities in inclusive education settings . Paper presented at the annual meeting of The American Council on Rural Special Education, San Antonio.

National Commission on Teacher Education. (1996). What matters most: Teaching and America's future. New York: Teachers' college, Columbia University.

National Council for the Accreditation of Teacher Education. (1996). Adapted from Carrier, J. P., *Achieving NCATE Accreditation: The Price and The Prize*, Quality Teaching,1, Spring 1992.

Sebastian, J., & McDonnell, J. (1995). Rural students with low incidence disabilities: Recommended practices for the future. Rural Special Education Quarterly, 14,31-38.

Templeman, T., Fredericks, H., & Udell, T. (1989). Integration of children with moderate and severe handicaps into a day care center. Journal of Early Intervention, 13, 315-328.

Wisniewski, L., & Alper, S. (1994). Including students with severe disabilities in general education settings: Guidelines for change. Remedial and Special Education, 15(1), 4-13.

National Center for Education Statistics, (1997) Characteristics of Small and Rural School Districts, U.S., Department of Education, Office of Educational Research and Improvement.

Fay Balch Jackson
Wayne State College
Wayne, Nebraska
Marion Madison
University of West Alabama
Livingston, Alabama

Teacher Training: Providing Instruction in a Basic Reading Strategy in Elementary Rural General Education Settings

The gap between special and general education in rural areas is lessening. The reasons for this range from transportation issues, personnel development opportunities, and recruitment of qualified staff (Sebastian et.al, 1997). Many general educators are constantly reading about new techniques in journals and then trying them in their classrooms in an effort to effectively serve the diverse children within their classrooms. However, as one rural teacher explained, "Some of those people must not have tried things out in a real classroom, or they certainly do have different children than I have." Using learning strategies that are considered to be in the province of predominately special education in real classrooms with general education teachers is something that needs to be studied. It is the purpose of this paper to present the findings from such a study.

The researcher developed the Read, Imagine, Decide, and Do (RIDD) strategy over a three year period in a rural school in Alabama and conducted a study to determine its effectiveness in a rural secondary special education classroom. The students involved in that study experienced a statistically significant increase in academic performance in content areas in and out of the special education classroom (Jackson, 1997).

During the course of that study, general educators who also used the strategy noted that RIDD was useful in increasing the academic performance of students in the general education classroom who were not identified as students with mild learning disabilities but who did experience difficulty in learning. The students increased their grades and their academic self esteem through the use of the strategy (Jackson, 1997).

The Development of Read, Imagine, Decide, and Do (RIDD)

Teachers who have been in the field of learning disabilities noticed that many students do not experience success, even when the material presented is on the appropriate reading level. The teachers often reported hearing comments such as "I can't even do this baby stuff".

In an effort to help students find ways to achieve success, the researcher observed how they performed while completing academic tasks. A number of common behaviors became obvious, particularly in the area of reading directions. First, students would stop reading at the end of a line of print, rather than at the end of the passage. This may be related to the fact that students who are young or inexperienced readers do not understand that written text is supposed to make sense (Gardner, 1991). Second, students would often scan the information to look for indicator words such as "circle, or "underline" without knowing *what* to circle or underline. A third behavior the researcher noticed was that students would begin a particular activity without reading the directions at all and assume that the exercise would be exactly the same as that modeled by the teacher.

Reading in content areas produced a great deal of difficulty for students with learning disabilities. Teachers noted and documented several behaviors. First, in reading, inexperienced readers have an illusion that comprehension means decoding successfully and fast (Baker, 1985). Baker further noted that young or poor readers tend to rely on lexical evaluation of a text, which is placing the main emphasis of a text on a single word rather than on the relationship of words and sentences within the entire text. The educators frequently stated that students would pronounce every word within a text perfectly, but would have no concept of the meaning within the passage. Manzo and Manzo (1993) defined reading as the act of *simultaneously* reading the lines, reading between the lines, and reading beyond the lines. In other words, it is important for readers to reconstruct the author's basic message, reconstruct the implied message, and make judgements about the significance of the author's message. If students only read the lines, the majority of the meaning of a text is lost.

Reading in general, whether it is in history, science, literature, or math has elicited poor performance from students with learning disabilities and those who are slow learners. When students find reading a constant challenge, they do not enjoy the activity; therefore, they avoid it as much as possible. Since students in rural areas are faced with a lack of cultural and social diversity (Coleman, 1987), reading is important in providing the knowledge necessary to increase academic efficiency and knowledge of the would around them. Any skill that is not used will deteriorate. Reading is certainly no different. Some teachers noted that when students are successful on their reading level, they were less fearful of reading band began to read more often. Borkowski (1987) stated that without high self-esteem both children and adults are less likely to employ strategies for learning. As self-esteem and self-efficacy increase, the fear to use strategies decreases.

Because of the need for general education teachers to serve diverse students in rural areas, the researcher enlisted the assistance of four general educators in a rural area in Northeastern Nebraska to further study the effects of learning strategy instruction in a general education classroom. The teachers used the same Read, Imagine, Decide, and Do (RIDD) strategy used in earlier studies in the secondary setting.

Read, Imagine, Decide, and Do (RIDD): Steps of the Strategy

After looking at the behaviors of students who have difficulty learning and finding some commonalities, the steps of RIDD began to emerge. Since students who are on lower reading levels than their peers often experience difficulty even within that level, the first decision was to make RIDD a strategy that would increase students' *efficiency*. When students experience success, they are likely to incorporate more efficient learning strategies.

The researcher noted that many students who have difficulty learning will read to the end of a line, rather than to the end of the passage. Therefore, the text is incomplete and the students loose the meaning. This led to the first step which is **R.** This stands for **read the passage from the first capital to the last end mark *without stopping.*** This was based on Garner's (1991) observation that rapid, accurate, and automatic decoding reduces memory demands for word identification, releasing memory resources for construction of meaning. Of course, rapid decoding is not the only key to good reading. As Garner continued, decoding does not ensure that meaning will be constructed successfully. There are certain other factors that produce comprehension failure. Anderson (1985) noted that when children who are just learning to read engage in particularly effortful, inefficient decoding, their comprehension is inevitably hampered.

Reading without stopping is important. That means that the students will need to decide, ahead of time, what they will call a word that is foreign to them. It is important to note here, that to begin this strategy, students must be at their independent level of reading. This is one area that the researcher modified for use in lower elementary grades. Since the students are just beginning to read, the teacher must model this step in every class. The teacher uses talk-a-louds before reading directions, math word problems, or sections of a reading passage and calls attention to the first capital and the last end mark of the reading material.

Good readers often skip words within a text and continue reading. Some have a "pet word" they insert, For instance, some good readers will use "Whatever", or "Big word". This may be easier than just leaving out the word. When teachers model reading aloud, they explain this ahead of time. This also lets students see that good readers do not always know all of the words. Even though in the lower grades, it is rare that a teacher will not know a word, the students are made aware that this is, in fact, a characteristic of a good reader. Very young students will not actually use this step because they do not have the background or experience to do so. The teacher, however, should model it whenever he or she reads aloud.

It is important that the students have a concept of how much will be read before it is time to stop. Actually saying, or thinking, "I'm going to read from the first capital to the last end mark" helps students to focus on the entire task rather than just one line at a time. This is especially relevant in reading directions or test items. The teacher may decide, at first, how much a student will read before going on to the next step. Then as students become more proficient that decision becomes their own.

The second step is **I.** This stands for **imagine or make a mental picture of what you have read.** This is one step of the strategy that even the youngest of learners can use. A number of researchers have examined visual imagery as a learning strategy (Hodges, 1992 Darch & Simpson, 1990; Mastropieri, 1988; Levin, 1983; Peters & Levin, 1986). They indicated that visual imagery has the potential for assisting students with learning disabilities. However, as Darch and Simpson (1990) found, visual imagery alone, when teaching rural students with learning disabilities, is not effective. Teaching explicit rules for learning information must not be ignored. Therefore, even though imagery is effective, and some times fun, it is only a part of the teaching-learning process.

When teachers read aloud, they can ask young students what they think certain characters or scenes look like. Teachers can also ask what the students think their paper will look like at the end of an exercise. This will allow students to better focus on the task at hand. Students learn quickly that the thought process is extremely fast. This also allows them to begin to conceptualize the idea that when a learning strategy is taught, once it is incorporated into the thought process, it is less cumbersome than it seems. For future strategy development, this is an important concept.

The Imagine step actually has two purposes, One is to help students focus on the concept and the other is to provide a self-monitoring procedure. Even when young learners or those who experience difficulty listen, the idea of knowing if something is understood or not is important. As Brown (1980) noted, when comprehension failure is noted, it is considered to be metacognitive success. If children do not notice that they are not understanding text information, they are unlikely to seek a strategic remedy (Garner, 1987). Using visual imagery also allows students to transform the new material into their own knowledge base. When this happens, learning is more efficient.

The third step is **D-decide what to do.** This step emerged though teaching math word problems and expanded to other areas. When students read the entire problem without stopping and had a mental picture of the situation, they decided what to do and in what order to complete the steps. In reading directions, students looked through to see exactly what they were supposed to do. In reading content areas, the students could decide to continue reading or get some help before continuing.

For teachers of young students, this step involves questioning. The teacher asks students what he or she needs to do next. Teachers guide students through several procedures they can use if they need help. This can range from asking someone for help to looking up a word in a dictionary. The procedures used for help are at the teacher's discretion and may be tailored to the specific situation.

The fourth step, **D-do the work**, also derived form teaching math word problems. It is during this step that the students actually complete the task. Often, students would attempt to read a problem and want to immediately start writing down numbers. By adding the last step, they can see that there are tings to do between reading and writing. It is interesting to note here that as students used RIDD when doing math problems, they often commented that they liked it because the only work involved was in the last step. This lends support to the idea that students with learning disabilities, and possibly those who experience difficulty, do not consider metacognitive processes important, rather, they only see the written product as evidence of successful learning.

The following report is of an ongoing study in which elementary general educators in a rural area of Northeastern Nebraska are using the RIDD strategy in their general education classrooms. There are four teachers involved. They teach first, second, third, and fourth grades. The discussion will include the methods, procedures, and results obtained over a five week period. The teachers will continue to use the strategy throughout the rest of this semester. This is a preliminary summary of their progress.

Methods and Procedures

The researcher conducted a three hour inservice for the elementary teachers in a rural school in Northeastern Nebraska. The school serves approximately 449 students in grades K -12. Only the elementary teachers attended the inservice because secondary teachers were involved in giving semester exams. Of the ten teachers who attended, four volunteered to participate in the study. The researcher did obtain the permission of the superintendent/principal to conduct the study in the school. The experience of the teachers ranged from 2 to 20 years. All of them were certified in their fields and held current Nebraska teaching certificates. Each teacher reported at least one student in her classroom who had been identified as a student with a disability or one who experienced difficulty learning.

The inservice included the following procedures: a) explaining the need for using a learning strategy, b) presenting the results of previous studies done on the RIDD strategy, c) explaining the steps of the strategy, and d) providing some modeling and training in the use of the strategy. The teachers also practiced using RIDD.

The participants began teaching the strategy at the first of the spring, 1998 school term. The lower elementary teachers predominately modeled the steps, but the teacher in the fourth grade class encouraged the students to use the strategy on their own following her explanations and modeling. After five weeks of using the strategy the teachers completed a survey about its use (see Figure 1).

Figure 1 RIDD Survey

The purpose of the Read. Imagine. Decide and Do. (RIDD) strategy is not to teach a specific subject. Rather its purpose is to allow young students and those who experience difficulty in learning to begin to think in a strategic manner. Further purposes include allowing students to become familiar with the concepts of visual imagery. the transformation of material into their own knowledge base. and to become their own problem solvers when they meet a difficult learning situation. Please honestly rate the usefulness of the RIDD strategy based on your experience with it by using the following scale.

1 = not useful
2 = somewhat useful
3 = useful
4 = very useful

The RIDD strategy was useful in the following areas:

1.	helping students focus on the task at hand.	1	2	3	4
2.	helping students find ways to solve their own problem	1	2	3	4
3.	helping to relieve students' stress when faced with a difficult learning situation	1	2	3	4
4.	assisting the teacher in demonstrating a learning strategy	1	2	3	4
5.	familiarizing students with the concept of visual imagery	1	2	3	4
6.	assisting students in transforming new knowledge into their own knowledge bases	1	2	3	4
7.	increasing students' comprehension	1	2	3	4
8.	helping students to read the instructions of exercises	1	2	3	4
9.	assisting students with math word problems	1	2	3	4
10.	increasing students' academic performance	1	2	3	4

Comments

BEST COPY AVAILABLE

Results

One of the teachers was unavailable at the time of the survey, but those results will be included in a future report. Of the three teachers reporting, they generally found the strategy to be somewhat useful or useful.

In helping students to focus on the task at hand, all of the teachers found the strategy useful.. For helping students to find ways to solve their own problems, one teacher found it somewhat useful. The other teachers indicated that it is useful. In the area of relieving student's stress when faced with a difficult learning situation, all of the teachers noted that RIDD is somewhat useful. As far as assisting the teacher in demonstrating a learning strategy, two of the teachers marked useful and one marked somewhat useful. Using the strategy to familiarize students with the concept of visual imagery was found to be useful by two teachers and somewhat useful by one teacher. Assisting students in transforming new knowledge into their own knowledge bases was found useful by one teacher, somewhat useful by another and not addressed by a third teacher. Two teachers found the strategy useful in increasing student's comprehension and one found it somewhat useful. Two teachers noted that the strategy is very useful in the area of helping students read the instructions of exercises; one teacher the third teacher did not respond. All of the teachers indicated that the strategy is useful with word problems. However, in increasing students' academic performance, the strategy ranged from somewhat useful to not useful (See Table 1).

Table 1-Results of RIDD Survey

	# of responses	$\bar{x}$	% Usefulness
1. Helping students focus on the task at hand	3	3.00	75%
2. Helping students find ways to solve problems	3	2.67	66%
3. Relieving stress	3	2.0	50%
4. Assisting teacher demonstrate strategy	3	2.67	66%
5. Familiarizing students with visual imagery	3	2.67	66%
6. Assisting students transform knowledge	2	2.5	62.5%
7. Increasing student's comprehension	3	2.67	66%
8. Helping students read instructions	2	4.00	100%
9. Assisting students with math word problems	3	3.00	75%
10. Increasing academic performance	3	1.67	42%

As indicated in Table 1, the teachers noted a 100% usefulness in the area of helping students read instructions. This is an important skill and is one that can assist students in both completing exercises and test questions.

The teacher in the fourth grade commented that the students knew the steps of the strategy but would not apply them unless they were reminded every day in every subject and sometimes in every question. The teacher expressed concern that the students were not using it automatically.

In strategy instruction, it is important that the students have a great deal of practice. In elementary school the purpose is to acquaint the students with metacognitive thinking. They will need to be reminded often. It may take two or three months before the students begin to internalize the strategy, especially those who are having difficulty. The benefit of this is that once this is part of the student's repertoire, he or she can use other strategies, as well as RIDD, with greater ease.

REFERENCES

Anderson, R.C., Habert, E.H., Scott, J.A., and Wilkerson, I.A.G. (1985) *Becoming a nation of readers.* National Institute of Education, Washington, D.C.

Baker, L. (1985). How do we know when we don't understand? Standards for evaluating text comprehension. in Metacognition, Cognition, and Human Performance Vol 1. (D.L. Forrest-Pressley, G.E. MacKinnon, and T.G. Waller Eds.) 155-205. Orlando, Florida: Academic.

Borkowski, J.G., Carr, M., and Pressley, M. (1987). "Spontaneous" strategy use: Perspectives from metacognitive theory. Intelligence, 11, 61-75.

Brown, A.L. (1980). Metacognitive development in reading. In Theoretical Issues in Reading Comprehension. (R.J. Spiro, B.C. Bruce, and W.F. Brewer, Eds) 00 453-481.Hillside, New Jersey: Lawrence Erlbaum.

Coleman, J.S. (1987) The relations between school and social structure. In M. Hallinan (Ed). The Social Organizations of Schools: New conceptualization of the learning Process. 177-204. New York: Plenum.

Darch, C., & Simpson, R.G. (1990) Effectiveness of visual imagery versus rule-based strategies in teaching spelling to learning disabled students. Research in Rural Education,7, 61-71.

Garner, R., Alexander, P.A., and Hare, V.C. (1991). Reading comprehension failure in children. In Learning about Learning Disabilities. (B.Y.L. Wong, Ed). San Diego: Academic Press, Inc.

Hodges, C.L. (1992) The effectiveness of mental imagery and visual illustrations: A comparison of two instructional variables. Journal of Research and Development in Education,26, 46-56.

Jackson, F.B. (1997) The effects of using a cross-content learning strategy: Read imagine, decide and do, (RIDD) on the academic performance of rural secondary students with mild learning and behavior disorders .Proceedings of the American Council on Rural Special Education; USA. 240-248.

Levin, J.R. (1983). Pictorial strategies for school learning :Practical illustrations. pp 214-237, In Pressley, M, & Levin, J.R. Cognitive Strategy Research. New York: Springer-Verlag.

Manzo, A.V. & Manzo, U.C. (1993). Literacy disorders: Holistic diagnosis and remediation. Ft, Worth: Holt, Rinehart, and Winston, Inc.

Mastropieri, M. (1988). Using the keyword method. TEACHING Exceptional Children, 20, 179-192.

Peters, E.E., & Levin, J.R. (1986). Effects of a mnemonic imagery strategy on good and poor readers; prose recall. Reading Research Quarterly, 21, 179-192.

Sebastian, J.P., Calmes, L.J., and Mayhew, J.C. (1997). Distance learners talk back: Rural special educators evaluate their teacher preparation program. Proceedings of the American Council on Rural Special Education; USA. 210-215.

Laura A. Reissner, Ed.D.
Northern Michigan University
Marquette, Michigan

PRACTICING WHAT WE PREACH: COLLABORATING ACROSS AND THROUGH COLLEGE METHODS COURSES

The literature is replete with studies showing the benefits and challenges of collaboration among regular and special educators in elementary and secondary schools (Evans, Townsend, Duchnowski & Hocutt, 1996; Friend & Cook, 1992; Heron & Harris, 1993; Johnson & Pugach, 1992; Schumm & Vaughn, 1992). Teachers are continually being asked to meet the various learning needs of the students, collaborate, and teach across content areas. Education students see this in the classrooms they observe in and read about it in their textbooks. However, they rarely see their professors trying to teach courses in an integrated fashion. It seems that most university education courses are taught as separate subject areas by professors who may not know what is being taught in any other class. Education students need to see how their methods classes connect and that working with others is not only possible, it is beneficial.

This is the second semester where we have blocked our Methods and Materials of Teaching Language Arts and Reading Instruction I, Teaching Social Studies in the Elementary School, Special Education and the General Classroom Teacher, and Educational Media methods classes at Northern Michigan University. In each class there are students who are unable to schedule the entire five class block due to scheduling conflicts, however about half of the students are in all of the classes. The goals of this block are to: 1) connect the subject matter in each course in ways which will enable students to see the connections among subjects; 2) model collaborative teaching for the students; 3) provide opportunities for the students to apply what they are learning in elementary classrooms, and 4) enable students to complete assignments which cross subject matter boundaries and apply in more than one course. Students meet in a local elementary school for three hours of classroom observation time and then receive approximately ten hours of separate instruction by their professors. Occasionally, classes are conducted together by all four professors to enable the students to see us together as a unit and to present topics of mutual interest.

In February of 1997 discussion began about a team approach for our two semester methods classes. Two teams were finally established (Block I and Block II). Block II will consist of Elementary Reading Instruction II, Children's Literature, Methods and Materials for Elementary Mathematics, and Science Methods and Materials. In May of 1997 Dr. Laura Reissner, Dr. Laura Hoffman,

BEST COPY AVAILABLE

Dr. Lorana Jinkerson, and Dr. Suzanne Standerford began planning for the Block I courses. Funds were made available to support two days of summer planning time. During this time our first assignment was to chart the tasks for each of our classes and why we include them. These were then presented to the group so we could all develop a better understanding of the goals, objectives and assignments for each of the classes. Next, we looked at how our assignments may overlap and how they may be changed or combined. Then, we looked at our topical outlines and due dates and how they might be arranged to better facilitate discussion and potentially reduce student overload. Finally, we organized each of the classes and included information regarding joint projects or assignments on each of the syllabi.

The first class session was conducted with all four professors and all of the students who were participating in the block. We felt that by physically being in the same room the students would begin to see how we envisioned the classes and why we were going to integrate the material across subject areas. The one assignment which we all participated in was an e-mail journal. Students in the reading and language arts method class spend three hours a week as part of their class time in a local elementary school observing. For this assignment, the students were divided into groups of 4-5 and each group member was responsible for writing an observation about their classroom experience from the week and writing a response to the other group member's observations. Each note was also sent to all of the professors. This gave all of us a chance to "see" what the students were seeing and to have a conversation about the students' observations. It was helpful for the students to see the multiple perspectives of the professors when we responded and the students were able to ask questions directly about our areas of expertise. They also see that there is more than one solution to a problem and more than one way to approach a problem. For the professors who were not in the classrooms, this was an added opportunity to connect our class discussions to experiences that the students were having in the schools. We were able to include strategies and tips that we otherwise may not have thought to mention. While this experience was very helpful, the students really felt like they were getting overwhelmed with writing and responding. This semester the students are responsible for writing an entry once a week and responding the following week, rather than doing both each week. This seems to be more manageable for all involved.

Another example of how we have that we have connected across the courses is with the Amazon Rainforest theme. Students learned how to plan instruction based on the social studies content based on the book The Amazon Rain Forest and its people by Marion Morrison. They teach mini social studies skills lessons based on the content of the book for Social studies Methods. Then for the Reading and Language areas class to prepare and teach group lessons which use reading and writing strategies to improve comprehension of the content of the book. In the Special Education class the students examine a variety of supplemental books on the rainforest which they use to modify lessons to meet the individual needs of various learners. In the Technology class, students use the Internet to find additional information on the Rainforest and then use technology to present their lessons. It is hoped that this type of teaching will carry over into their own classrooms in a few years.

Additional strategies that have been employed to help students understand the connection between courses and ways to facilitate collaboration include assignments that count for multiple classes. For instance, students must create a graphic organizer on what they have learned about teaching students with learning disabilities for one class. It is graded for content by me and then the same assignment can be turned in to Dr. Jinkerson for the Technology course as a demonstration of their competency in creating graphs and charts using the computer. Students have been seen waving pieces of paper in the air in the computer lab and shouting, "this is going to count for three classes!". Students also create sections of their professional portfolios for each of the classes. This is the capstone of the methods experience and one which we hope will carry over into Block II.

The rewards and benefits of this block have been positive for both the faculty and the students. From a faculty standpoint, this collaboration has given us a greater understanding of what each of us are teaching. The three common meetings with the students have given all of us the opportunity to answer student questions from a variety of philosophies. This has given the students the opportunity to see how we work together to solve problems. Additional benefits have been in planning assignment due dates, and sharing common assignments. This block has also given me the opportunity, as the special educator, to show students how to include students with disabilities in the regular classroom, regardless of the disability, by using supplemental materials. The extra work required to teach these courses as a block has been insignificant compared to the benefits that both the students and professors received from the opportunity to work together.

References

Evans, D., Townsend, B.L., Duchnowski, A. & Hocutt, A. (1996). Addressing the challenges of inclusion of children with disabilities. Teacher Education and Special Education, 19(2), 180-191.

Friend, M. & Cook, L. (1992). Interactions: Collaboration skills for school professionals. New York: Longman.

Heron, T.E. & Harris, K.C. (1993). The educational consultant: Helping professionals, parents, and mainstreamed students (3rd ed) Austin: Pro-Ed.

BEST COPY AVAILABLE

Johnson, L.J. & Pugach, M.C. (1992). Continuing the dialogue: Embracing a more expansive understanding of collaborative relationships. In W. Stainback & S. Stainback (Eds.), Controversial issues confronting special education (pp. 215-222). Boston: Allyn & Bacon.

Morrison, M. (1993). The Amazon Rain Forest and Its People. Austin, TX: The Steck-Vaughn Company.

Schumm, J.S. & Vaughn, S. (1992). Plans for mainstreamed special education students: Perceptions of general education teachers. Exceptionality, 3(2), 81-98.

Henderson, Cheryl
Kyger, Maggie
James Madison University
Harrisonburg, VA 22807

Dana Guarino-Murphey
Lynchburg College
Lynchburg, VA 24501

TEAMS, NETWORKS, AND ASSISTIVE TECHNOLOGY: TRAINING SPECIAL EDUCATORS IN RURAL AREAS

Technology is becoming a more integral part of all our lives. For students with disabilities, technology can help promote mobility, communication, learning, and independence by enhancing abilities and compensating for challenges. Technology can help children with disabilities overcome a common condition called learned helplessness, which is their perception that they do not have control over their environment. Learned helplessness often results in overdependence on adult assistance. Using assistive and adaptive devices, children discover that they can make things happen and therefore they develop a sense of competence and independence (Brett, 1997).

As special education enrollments increase, larger numbers of students in those programs are using assistive technology (AT) to not only meet their basic needs and increase independence but also to improve their successful inclusion into mainstream settings. Because of the rapid growth and change in technology in the past decade, many school personnel have limited or no education in the appropriate use of assistive technology in educational settings. Behrmann (1995) has identified training needs ranging from awareness of assistive technology and methods to access information & services to issues of policy development, funding, evaluation, training in use of devices, and approaches to training consumers.

In order to be beneficial and have maximum effect, teachers and other team members providing services to students with disabilities need to have both pre- and in- service training in screening and assessment, planning, and implementation of assistive technology. Ninety-two percent of the respondents in a national survey of special education teacher preparation programs confirmed a need for technology training (Behrmann, McCallen, & Morrissette, 1992). A national study by Macro International, Inc. and the Office of Special Education Programs indicated one of the major reasons that special educators do not take more advantage of technology is the lack of training and technical assistance ("Technology is Underused in Special Education,"1997). Comprehensive, flexible, and multilevel training systems are needed to ensure that school divisions are prepared to assess the classroom technology needs of their students with disabilities and recommend appropriate assistive devices to meet those needs. In the Macro International/OSEP study, 46.7% of direct service providers believe appropriate training in technology instruction is provided ("Technology is Underused in Special Education,"1997). A study by Behrmann, Morrissette, & McCallen (1992) indicated that 84.3% of Virginia school district administrators believed it important to have trained personnel who can identify assistive technology needs in their school systems.

In addition to developing student independence through the use of AT, appropriate training for staff is essential in order to limit the growing phenomenon known as "technology abandonment" (adopting and then abandoning assistive devices due to lack of training in its proper use). According to Behrmann (1995) there is a strong need for service providers to be familiar with the available technology and to be well trained in the uses, adaptations, and practices of technology for person with disabilities. Training that is responsive to the unique needs of school divisions and that provides teachers with methods to integrate technology into the curriculum will develop school-based expertise and ultimately provide needed services to students. In rural areas, creativity and resourcefulness often abound. However, school systems still face numerous challenges, including limited finances, few related services personnel, and lack of access to training and/or evaluation centers. Assistive technology devices and services provided by local school systems can vary widely. The trained and experienced personnel (especially in specialized fields of practice) who are available are frequently stretched to their limits as they try to maintain contact with numerous sites. Depending on the resources of the school system, other technical support may be very limited, such as computer availability but lack of teacher training, limited inservice trainers with technology expertise, and/or insufficient funds for purchasing assistive technology devices.

Providing a grass-roots technology training system is one proven example of serving the diverse needs of teachers and related service personnel in Virginia. An array of functional training options designed to enable education personnel to learn about the use of assistive technology in the school setting has proven to be an effective means of taking technology to the schools. Training has been available on a variety of levels, from awareness to expert, including technology support networks & train the trainer programs, system wide AT team training, hands-on low-tech seminars, and lending libraries. In some instances the training sessions have been open to all personnel in the service region. The goal, however, of the team training and train-the-trainer activities has been to provide intensive training to a core group of individuals in a long-term, consistent manner rather than through one time only workshops. All the above mentioned methods are used to increase direct service providers' knowledge and skill level in the daily use of assistive technology in the classroom. By targeting general education teachers in inclusive settings, special education teachers, and related service providers, those who are providing the direct services to the students requiring and using the technology are the beneficiaries of the much needed training and technical assistance.

The training and technical assistance centers (T-TAC) are projects of the Virginia Department of Education funded by state and federal IDEA monies. T-TACs are located at colleges and universities in the eight regions of Virginia, affording every school system equal access to services. T-TACs are are one of the major statewide efforts for the training of professionals serving children and youth with disabilities with services including on-site and off-site consultations, small group and regional workshops, information searches, newsletters, and lending libraries. While the T-TACs provide services encompassing all ranges and types of disabilities, one of the most frequent content area requests has consistently been in the area of assistive technology. Based on the increasing demands, the T-TACs have hired technology specialists who can assist professionals in developing skills that are directly related to the needs of their students. While there is a cohesiveness of services between the eight T-TACs, each office has also developed and maintains distinctive features appropriate for its service region. The networks and team training described in this paper have been designed for an office serving small cities, towns, and rural school systems to train their personnel to become the local "experts" or resources for their systems while increasing the capacity for service delivery in each locality. The training options provided have been successfully implemented in rural school divisions in central and southwestern Virginia.

As with any curriculum knowledge base, not all individuals are expected to be experts in every area. Similarly, no one person is usually experienced in all AT systems or devices. Technology support networks had their origin when interest in technology was in its early stages and few resources were available for the personnel interested in using such technology. In order to educate a larger population on the use of specific AT equipment, a train the trainer system was developed whereby skilled AT educators shared their knowledge and experiences with a select group of professionals. The first TAC sponsored technology network was started in rural southwest Virginia in 1989. Teachers and therapists from local school systems met quarterly on Saturdays at various sites throughout the region to receive training, share ideas, resources, successes, and discuss challenges. Through these gatherings professionals identified their own specific skills and competencies, determined the skills they would like to develop, and decided on future training needs. During the summers TAC sponsored a 3 day technology institute that involved training at beginning, intermediate, and advanced levels for network members. Vendors would attend to demonstrate the latest technology innnovations and offer training sessions; they have proven to be invaluable in providing technical support and resources. Personnel were given training in specific applications (ex., Boardmaker) or devices (ex., WhisperWolf) until they were skilled in its use. In return, these individuals became trainers to teach the appropriate use of the software or devices to others. As a result of this "Train the Trainer" approach, individuals who were skilled in a specific computer application, adapted device, or programming needs became resources for others. Participants returned to their home school systems to be resources or "troubleshooters" for other personnel. In some instances, trainers have been given release time or professional leave to visit a school (or school system) not their own. In instances when the trainer was not granted leave, the T-TAC has been able to reimburse the school system for substitutes if necessary. This was a cost effective means of training a small group of professionals with far reaching implications for training at the local level. Additionally, requests for low-tech assistive technology diminished at the TAC office and the pool of consultants increased as a result of this network.

Creation of system-wide evaluation teams developed from the need for localities to have personnel readily available to assess students for the appropriate use of assistive technology. Co-sponsored by the T-TAC, a regional consortium of school systems, and two other state projects, the initial week long training institute held during the summer of 1997 was established for six school systems. Each of the six systems identified a core team to become responsible for and knowledgeable about AT evaluation. Team members included speech therapists, special education teachers, occupational and physical therapists, and a school psychologist; a special education administrator oversees the AT team operations in each locality. Recertification points or the option of enrolling in a three credit graduate course with reduced tuition rates were offered to institute participants. Throughout the school year the teams have been provided ongoing training via several day long seminars in order to further develop their expertise. The collaboration between the sponsoring agencies and school systems participants has helped to strengthen each team's expertise and enhance capacity building in each locality. Another week long training institute is scheduled for the summer of 1998. This model of training is easily adaptable to local needs; current plans are for the initial team training to be replicated during the summer as another group of school systems will establish AT evaluation teams and also to be replicated in another region of Virginia.

Assistive technology devices range on a continuum from low-tech to high-tech, from adapted pencils & spoons, battery operated toys, and picture communication boards to powered wheelchairs and voice output computers. The Individuals with Disabilities Education Act (IDEA) defines an "assistive technology device" as any item, piece of equipment, or product system whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. (20 U.S.C. 1401[25]). A research study by the Job Accommodation Network reported that the majority of assistive technology devices are not unreasonably expensive; that is, 69% of devices or accommodations cost less than $500 and 50% cost less than $50 (Behrman, 1995). Based on the definition in IDEA, there are a myriad of items that teachers and therapists are already using in classrooms that could be considered low-tech AT devices. There are also many items that can be acquired or adapted at minimal or no cost which led to the creation of hands-on low-tech "make it, take it" seminars. At these sessions, participants are provided guided instruction on creating switches, augmentative communcation boards & overlays, and battery interrupters; adapting toys, books, and writing materials; and developing modified curricular activities. Sessions are often held after school at a central location for 2 to 3 hours. Materials are provided by the participants, workshop sponsors, and donations. Participants are provided print and verbal instruction along with demonstrations by the workshop leaders and are able to make what is appropriate for their setting. These informal workshops are held several times during the school year with some of the activities being repeated throughout the year (ex., switch making).

Special education teachers have reported they do not have access to appropriate computer software ("Technology is Underused in Special Education,"1997). Lending libraries are operated by all the T-TACs in Virginia. Although operating procedures vary from office to office, all have similar resources. Included in the lending libraries are curriculum materials and guidebooks, assessment instruments, resource books and videos on the topics of disabilities, families, integrating programming, policy and legal issues, program design, and other topics related to special education. Each library has an extensive collection of computer software, assistive technology devices, augmentative communication devices, adapted toys, and other technology related items. A new "product" of the libraries is technology bundles--comprehensive packages of compatible items (ex., IntelliKeys with appropriate overlays and software) or a variety of items (ex., an assortment of switches). These bundles enable a teacher or therapist to utilize a set of materials at one time to determine appropriateness with a student rather than try materials in a more random fashion. Each T-TAC maintains an annotated bibliography of resources, hard copy and disk, which are available to personnel in the field. Materials are loaned to personnel in the respective regions, and sometimes across regions, for several weeks. The items are accessible by visiting the library, by mail, or in some instances, are personnally delivered by T-TAC staff. With the technology related materials, TAC staff often incorporate an on-site technical assistance visit with delivery of the materials in order to determine appropriateness of the materials for the student/class in question or to provide assistance in appropriate use of the materials to the teacher requesting the items.

While the technology networks, team training, workshops, and lending resource library reviewed in this paper had their origins in a university based training system and had grant funding from the state department of education, school division personnel have assumed responsibility for some services. Initial start-up costs may at first appear to be unmanageable; however, by merging resources of existing programs and/or by securing grants or funding from sources such as civic organizations, private corporations, and advocacy groups, the programs are workable. A major expense is the purchase of computers, assistive technology equipment, and augmentative communication devices. Securing a central location to house the materials and identifying personnel to coordinate services and manage the lending library could be decided and costs shared by participating programs. Other costs to consider are distribution, return, and repair and updating of resources.

In providing training sessions, program personnel need to identify and address the skills and competencies of the individuals who will be involved as participants. Recipients of the training must be included in the planning process in order to identify and plan the most effective services. Costs may be incurred by bringing in outside consultants and trainers. However, often times there are "experts" within systems waiting for the opportunity to share their expertise. Other resources for training include personnel from hospitals, state departments of education and vocational rehabilitation, local private agencies and organizations, and parents. Also, much technical assistance is available from the companies which manufacture and sell software, assistive technology, and augmentative communication devices (Edmark, Mayer Johnson, AbleNet, etc.). With dedicated and involved personnel, committed resources, and time, all the training options which have been presented can be implemented and repliced in a variety of settings.

References:

Behrmann, M.M. (1995). Assistive technology training. In K.F. Flippo, K.J. Inge, & J.M. Barcus (Eds.), Assistive technology: A resource for school, work, and community (pp.211-222). Baltimore: Paul H. Brookes.

Behrmann, M.M, McCallen, M.H., & Morrissette, S.K. (1992). Assistive technology issues for Virginia schools. Technical report submitted to the Virginia State Special Education Advisory Committee, Richmond, VA. Fairfax, VA: George Mason University.

Brett, A. (1997). Assistive and adaptive technology--Supporting competence and independence in young children with disabilities. Dimensions of Early Childhood, 25(3), 14-20.

Flippo, K.F., Inge, K.J., & Barcus, J.M. (Eds.). (1995). Assistive technology: A resource for school, work, and community. Baltimore: Paul H. Brookes.

Gray, S. (1997). AAC in the educational setting. In S.L. Glennen & D.C. DeCoste, Handbook of augmentative and alternative communication (pp.547-597). San Diego, CA: Singular Publishing Group.

Individuals with Disabilities Education Act of 1990 (IDEA), PL 101-476. (October 30, 1990). Title 20, U.S.C. 1400 et seq: *U.S. Statutes at Large, 104*, 1103-1151.

Technology is underused in special education. (1997, July). CEC Today,4(1), 1.

Dr. Catherine Medina
Ms. Doris Jones
Dr. Susan Miller
and the NAU Research Team*
NAU/CEE, Box 5774
Flagstaff, Arizona 86011-5774

Traditional Versus Contemporary Navajo Views of Special Education

Introduction

Respect of cultural values plays an intricate role in obtaining services for Navajo children with disabilities. In order to effectively meet the needs of students with disabilities and successfully work with their families it is essential to understand the broad context of Navajo culture as well as individual family beliefs (Cunningham, Cunningham, & O' Connell, 1987). In depth consideration must be given to the intricate clan system, language dominance, and cultural views of the parents of Navajo children who are disabled.

The traditional philosophy of the Diné (Navajo people) evolves around four main areas: thinking, planning, life and strength. When these areas are in harmony and balanced a person is said to have "Hózhógo Naasháa" which means, "In Beauty We Walk" (Prater, Jones, Miller, Gilmore, Harwood, Morris, Badonie, Gilmore, Hall, Gilmore, Scott, Joseph, Tallis, & Wooll, 1997). Today among the Navajo people a wide range of beliefs can be encountered. Some Navajos practice orthodox Navajo religion, utilizing many ceremonies and strongly adhering to traditional ways and beliefs. Other Navajos have embraced contemporary medicine, but still honor and respect traditional ceremonies and beliefs. Finally, there are Navajos that utilize contemporary medicine and have no foundation in traditional views or beliefs.

Purpose

The purpose of this paper is to provide an understanding of how traditional Navajos and contemporary Navajos view individuals with disabilities. Examples will be provided of how parents, guardians, educators and community members address the needs of students with disabilities.

Setting

This study was conducted in and around Kayenta and Piñon, Arizona on the Navajo Reservation. The Navajo Reservation covers approximately 24,000 square miles in three states—Arizona, New Mexico and Utah (O'Connell, J.C., Minkleer, S. Dereshiwsky, M., Guy, E., & Roanhorse, T, 1992). Navajo Land is located between the four Navajo sacred mountains: Sisnnajiní or Blanca Peak in the East, Dook' o'sliid or the San Francisco Peaks in the West, Tsoodzi or Mount Taylor in the South and Dibe Ni`tsaa or Mount Hesperus in the North. Approximately 156,000 Navajos reside on the reservation (Tsosie, 1990).

Method

This study was conducted by undergraduate and graduate special education students enrolled in the Rural Special Education Project (RSEP) and the Piñon Partnership Program (PPP). Under the supervision of their instructors, the RSEP and Piñon students designed the survey and interview questions, obtained the data, and assisted in the data analyses of this study.

The participants targeted in this study consisted of 30 staff members from the Kayenta and Piñon Unified School Districts: 21 Navajos, eight Anglos and one Hispanic. The staff members included general educators, special educators, administrators, school psychologists, home liaisons and special education related service staff. Eleven of the Kayenta and Piñon staff members were interviewed and another 19 of the staff members were given surveys that were later collected by the researchers. In addition, a total of nine community professionals were surveyed, eight were Navajo and one was Anglo.

The parental participants consisted of 15 Native Americans, three of whom were medicine persons. A total of seven parents were directly interviewed by the researchers. Of the seven parents interviewed, four needed to have the interview interpreted in Navajo. The eight remaining parents were given surveys which were later collected by the researchers. Finally, of the three medicine persons who were interviewed two were medicine women and one was a medicine man. All three interviews were given in Navajo.

Results

Interview and Survey Questions

Question 1: What is the traditional Navajo view of children/adults with disabilities?

Educators/community service personnel:

The majority of responses from the school personnel implied that traditional Navajos viewed disabilities as a result of "imbalance, disharmony...and/or the breaking of taboos." Many of these taboos dealt specifically with behaviors that parents shouldn't do. For example several educators and community personnel stated that, "...looking at dead animals, avoiding certain ceremonies, handling frogs, and fishing..." were taboo. One of the most mentioned taboos among these participants had to do with marriage and the Navajo Clan System. Traditional Navajos prevent members of the same or closely related clan(s) from marrying each other, which in effect prevents intermarriage and the disorders related to intermarriage. Not only were disabilities the result of broken taboos, but individuals with disabilities were in themselves taboo. These individuals were "kept at home" and their families would "hide them." Rarely were disabled individuals seen in public. These were only a few of the many traditional taboos articulated by educational professionals.

Three of the nine community service personnel interviewed/surveyed stated that disabilities were traditionally caused by the breaking of taboos, such as marrying into one's own clan. One community personnel stated that disabilities among adults can be caused by witchcraft. The others interviewed did not mention taboos, but did state that traditionally one would feel sorry for children with disabilities. One person indicated that, "Navajos will go out of their way to help their children." Another respondent stated:

> Sometimes I know the traditional view of [disabled] children and adults is that they are special people. The extra sixth sensory...that they have a special talent to sometimes foretell a fate or fortune of an individual or group. And then I think the traditional has always viewed them as someone not to be made fun of...and they are special people...and they have roles as teachers—role models within the tribal group. They're the ones that are teachers. And those...men [who] have been...feminine...they have roles as teachers. And then the tribal members go out as leaders and warriors, and I guess nowadays...find employment. The disabled people are usually teachers.

Parents/guardians:

Of the 15 respondents, four parents/guardians viewed disabilities as a gift. Five parents/guardians thought that disabled children were taboo and "had a dark side to them." Three parents/guardians responded that individuals with a disability were different and were looked down upon.

The three medicine persons, who are part of the parental group, felt it was very difficult to care for a person with a disability. One medicine person stated, "There is an increase of Navajo people who don't believe or weren't taught traditional values. Therefore, they are breaking taboos without realizing how it might affect them later in life."

Question 2: What is the contemporary Navajo view of children/adults with disabilities?

Educators/community service personnel:

A majority of the educator responses viewed disabilities as being acceptable now that more support services for individuals with disabilities have become more available on the reservation. One educator stated that, "People and parents are more educated and aware of the opportunities in schools and other places." Two of the Navajo respondents thought disabilities were a "blessing" and viewed children with disabilities as a gift. Other Navajos viewed disabilities as being the result of breaking or violating some Navajo traditional culture or taboo.

Navajo professionals in Kayenta and Piñon stated that contemporary Navajos are more accepting of disabilities because they are more educated. The majority of contemporary Navajos indicated that disabilities were due to society or environmental issues, such as lead and uranium poisoning. One professional stated:

> The more you know about it [disabilities] the more you are able to deal with these disabilities. If you read about them [disabled persons]...you have more knowledge about how to deal with them...and more respect for them as people.

Parents/guardians:

The majority of the respondents to this question were more accepting of disabilities because of all of the opportunities available in schools, local and statewide services. Some of the respondents stated that disabilities are viewed as "handicapped," and "some [Navajos] will think of it as a burden."

All three of the medicine persons agreed that there are contemporary services available which are utilized by individuals each day. Contemporary individuals rely on Western medicine.

Question 3: Do traditional Navajo practices ever put families in conflict over how to best meet the needs of their child with disabilities?

Educators/community service personnel:

Eleven educators responded (seven Navajo, three Anglo and one Hispanic) that they had experienced conflict when obtaining or delivering services. Educators indicated that most of the students they serve with disabilities are living with extended families and are often being raised by their grandparents. Not able to understand or speak English, extended family members are often misdirected and misinformed about the resources for their child. Always keeping the best interest of the child as a priority, many extended family members are content when their child obtains a blue-collar job. This increases his/her independent daily living skills.

Two Navajo professionals in the Kayenta community responded that it's against Navajo traditional values and religion to utilize Western medicine. The traditional Navajos will pay the medicine man for health care. A Navajo nurse explained that modern technology can help, but traditional Navajos rely on traditional medicine. One Navajo also responded that Western medicine and traditional medicine are in conflict. Another Navajo respondent stated that Navajo medicine deals with the inner part of your soul. The respondent continued, saying:

> A lot of the medicine practices, like when you're not feeling at harmony with yourself, you can go to a Navajo ceremony and people can pray for you there. It's a whole family, holistic kind of being—being strong—people helping you be strong.

Parents/guardians:

Nine of the parent/guardian respondents said that they've utilized both traditional and contemporary medical practices for either themselves or other family members. They initially see medical doctors for a diagnosis and then present this to a medicine man for additional help. There are specific ceremonies for specific problems.

Of the three medicine persons interviewed, one medicine man stated, "I always seek a medicine man first before white medicine..." They all felt strongly about seeking traditional services first and then seeking contemporary services. Traditionally, "....we cure the mind and body, not cut and scar the body... We cure a person...through herbal medicine, ceremonies and blessing and prayers."

Question 4: If you do feel as though traditional practices put families in conflict over how to meet the needs of their children with disabilities, what has your role been in resolving these traditional/contemporary conflicts?

Educators/community service personnel:

One concerned Anglo educator felt that her role has been to understand the educational options available to the Navajo people and to assist in finding what best suits and meets the needs of the families. Some Navajo educators responded that they seek traditional ceremonies to put balance back into a person's life. One Anglo and one Hispanic responded that although they are not involved with this decision, they respect the opinion of the Navajo families. Finding beneficial medical services was an answer that was given by an Anglo when asked about resolving traditional/contemporary conflicts. Another Anglo working on the reservation doesn't see this as part of her job description and doesn't get involved. All professionals in the community who responded agreed that it was up to the individual to utilize both traditional and contemporary services for the benefit of the student.

Parents/guardians:

A majority of parents/guardians stated that they seek immediate attention through Indian Health Services (IHS), but they also seek the help of traditional ceremonies, because they don't feel comfortable with the diagnosis of the medical professionals. One parent stated:

> I have a child with a disability and I don't think there are any conflicts in meeting the needs of the child. You have to take both the Navajo practices and the Western practices and put them together with your child.

One medicine man and one medicine women responded that they felt that they heal the mind, and body. One stated, "We don't do surgeries and make scars on human bodies as do the medical professionals." Another medicine women stated that contemporary medicines work well physically, but the practices lack cultural values and language.

Question 5: Do you feel traditional Navajo practices and medicine can coexist with contemporary Western medicine?

Educators/community service personnel:

The answer to question five was unanimously "yes" to varied degrees. One school employee said:

> Contemporary Western medicine and traditional Navajo practices can coexist. Traditional Navajo practices treat the whole person (physically, emotionally, intellectually and spiritually). Western medicine is beginning to change its focus slowly, but until they begin to incorporate such standards, it will be a long time before they accept the more unorthodox ideas of Native American traditional healing.

All the professional community responses agreed that traditional and contemporary medicine can coexist. Medical professionals can work with traditional Navajo practices. One professional stated that, "They will eventually have both medical services practiced. If one doesn't meet their needs they will try the other."

Parents/guardians:

All of the people interviewed and surveyed stated, whether directly or indirectly, that traditional services could coexist with contemporary services.

All three medicine persons responded that traditional and contemporary medicine can coexist, and as long as we work together we can make the person with a disability become better. They also stated that some traditional ceremonies and herbal medicine were allowed in hospitals.

Question 6: If you are Navajo do you consider yourself to be a traditional or a contemporary Navajo?

Educators/community service personnel:

Seven parent/guardians regarded themselves as traditional Navajos. However, the majority of parents/guardians and community members stated that they were either contemporary Navajos or both contemporary and traditional. One respondent stated:

> In my mind, I guess I am both. I go in either way and don't really make a division line saying I'm going to be this one day and that another. I am both of them I guess.

Parents/guardians:

Four people answered that they considered themselves to be traditional Navajos and four considered themselves to be contemporary Navajo's. Four answered that they consider themselves to be both traditional and contemporary. One person was not sure, "I was brought up with traditional beliefs, but we still attended church every Sunday."

> I consider myself traditional because I can speak the language...and I know a lot of the traditional beliefs that the older Navajo's practices and some of the newer religion that can be practiced. I consider myself contemporary Navajo in my generation, in my age group, where people are educated, especially as teachers.

All three medicine persons responded that they were very traditional.

Conclusions

It is obvious from the interview responses that varying beliefs about individuals with disabilities exist. Traditional views regarding the cause of disabilities often centered around the breaking of taboos or not obeying traditional cultural ways. Others traditional views supported the belief that individuals with disabilities had a special "gift" or were "blessed." Contemporary views of individuals with disabilities highlighted that social and environmental influences were primary causes of disabilities. The overwhelming majority of respondents felt that traditional and contemporary interventions were appropriate for individuals with disabilities. Nearly all the respondents felt that as services became more available on the reservations that attitudes toward individuals with disabilities became more positive.

*The NAU Research Team consists of the following: Beach, M., Begay, M., Begaye, D., Bitsui, S., Blie, L., Bob, L., Bob, S., Castillo, T., Crank, C., Delmar, B., Denny, V., Dixon, L., Dove, M., Dugi, R., Fuller, D., Gilmore, E., Gonnie, J., Grochowski, J., Hoskie, L., Manygoats, C., Montoya, E., Mullins, J. S., Orlinda, J., Singer, R., Snyder, M., Webb, R., Zonnie, T.

The Rural Special Education Project was supported by a grant to the Center for Excellence in Education at Northern Arizona University from the U.S. Department of Education, Office of Special Education and Rehabilitation Services, Division of Personnel Preparation (#HO29B50069). Additional support was provided by the Kayenta Unified School District. The opinions expressed in this article are those of the authors and do not necessarily reflect positions of the USDOE or KUSD.

References

Cunningham, K., Cunningham, K., & O'Connell, J. (1992). Impact of differing cultural perceptions on special education service delivery. Rural Special Education Quarterly, (8.1) 2- 7.

O'Connell, J., Minkler, S., Dereshiwsky, M., Guy, E., & Roanhorse, T. (1992). Identifying unique challenges to the provision of rehabilitation services on the Navajo reservation. Rural Special Education Quarterly, (11) 13-19.

Prater, G., Jones,D., Miller, S., Gilmore, S., Hgarwood, R., Morris, C., Badonie, N., Gilmore, B., Hall, T., Gilmore, L., Scott, D., Joseph, T., Tallis, B., & Wool, J. (1997). Transition challenges and strengths specific to the Navajo Nation. American Council on Rural Special Education Conference Proceedings. Oklahoma State University.

Tsosie, D.J. (1990). Population and housing characteristics of the Navajo Nation. Window Rock, Az.: A Navajo Government Publication.

Dr. Veronica Gold
Dr. Ellen Williams
Department of Special Education
Bowling Green State University
Bowling Green, OH 43403

THE ENTREPRENEURIAL CURRICULUM: RURAL SCHOOL-COMMUNITY PROCESS FOR VOCATIONAL TRAINING OF ADOLESCENTS WITH DISABILITIES

Introduction

Within the last decade, several studies have found that vocational training opportunities for adolescents with disabilities are inadequate. For example, Divers-Stamnes (1995) reported that the lack of apprenticeships or community-based training programs for students who may not obtain post-secondary training restricts vocational options to those few available jobs requiring minimal training or experience. Further, a report entitled What Work Requires of Schools: A SCANS Report for America 2000 (U.S. Department of Labor, 1991) suggest that the acquisition of competencies, skills, and personal qualities required for successful employment by adolescents with disabilities has not been developed in real work environments. Among the reasons cited by Brolin (1996) for the poor development of work skills among adolescents with disabilities at an **educational level** are:

- a pervasive "underestimation" of the vocational potential of children and adolescents with disabilities;
- lower levels of commitment to individuals with disabilities by state and federal governmental agencies;
- a lack of well-designed research studies on the accomplishments of persons with disabilities;
- a scarcity of appropriate training strategies and occupational exploration opportunities.

Bandura (1997) also notes several factors which impede work adjustment and the opportunity for personally meaningful work among adolescents with disabilities. Among factors cited at a **personal level** are:

- The lack of functional links between the school and the workplace;
- A "disconnect" between academic performance and career training opportunities in which poor performers are set adrift with limited educational competencies and a lack of work skills;
- Disbelief on the part of students that they have the ability to acquire the skills necessary for mastery of requisite academic or work-related skills;
- Negative workplace climates stemming from weak supervisory skills.
- Low sense of self-efficacy among adolescents regarding the ability to secure employment in a quality job.

In addition to the educational and personal variables impacting career training opportunities for adolescents with disabilities, there are several significant rural characteristics which may inhibit the development of strong vocational training programs. Among those **rural factors** cited in the literature are:

- Limited financial resources inherent in rural schools and communities (Carlson, 1993);
- Long-term poverty (Stern, 1992) which according to Bandura (1997) does "breed a low sense of occupational efficacy regardless of the prestige level of the vocation" (p. 188).
- Long-term economic decline (Carlson, 1992);
- Distance and other geographic barriers (Helge, 1992);
- A limited availability of technical and human resources (Helge).

Despite these problematic barriers, the sense of community which exists in rural locations has been cited as the single, critical element leading to quality educational experiences for rural students with disabilities. However, both the strengths and weaknesses of rural communities as well as the personal factors inherent in many adolescents must be factored into the development of effective career and vocational training strategies.

The Entrepreneurial Curriculum

Webster defines an entrepreneur as an individual who organizes a business undertaking for profit. Because the term in our culture may be associated with entrepreneurs like Henry Ford or more currently, Bill Gates, who have acquired great wealth due to special knowledge or skill, and because of the persistent perception that people with disabilities are incompetent; the notion that adolescents with disabilities could acquire entrepreneurial skills may seem incomprehensible to many. Brolin (1996) notes that people with disabilities experience a *generalized underestimation* of vocational potential from educators, parents, employers and the general public. Yet Bandura (1997) reports that guided mastery programs, rehearsal, problem-solving strategies, and psychological support lead to adaptation, higher generic skills, resiliency, and improved self-efficacy among adolescents. The entrepreneurial curriculum contains these elements and offers greater vocational choice and potential independence to students with disabilities.

It is also likely that better vocational training programs with improved training techniques, and the opportunity for occupational exploration may be achieved through the implementation of an entrepreneurial curriculum. Further, this curriculum may maximize the use of scarce rural community resources and improve the links between the educational and business communities in rural areas. It is for these reasons that an entrepreneurial curriculum for students with disabilities is under development.

Generally, there are three phases of vocational preparation; general education, career education, and specific vocational programming. Both general and career education should begin when children enter school, and specific vocational education (entrepreneurial skills) should begin in early adolescence. The following tables summarize the career education competencies students should acquire at elementary and junior high levels as a basis for entrepreneurial training during adolescence. These competencies have been adapted for use in special education programs from the national entrepreneurial curriculum funded and developed by Junior Achievement (1997). The first table outlines the elementary (K-6) curriculum while the second table outlines the junior high curriculum for career education competencies.

DOMAIN	OBJECTIVES	SKILLS AND TERMS
The Individual	•States role in a variety of activities. •Identifies economic activities. •Defines interdependence. •States benefits of saving money. •Defines role of consumers.	•Active listening •Defines individual, work, needs/wants, buy, sell, choice, saving, bank, consumer, earnings, exchange. •Demonstrates a decision-making process. •Reads and contructs graphs.
The Family	•Defines a family. •Describes interdependence in family work and life. •Discriminates between need and want. •Matches term and symbol on maps. •Locates business and service on map. •Matches family needs and wants with a	•Defines family, work, need, want, incentive, scarcity, job, employment, tools, skills. •Active listening •Analyzes information •Demonstrates a decision-making process. •Uses symbols to gather information. •Follows directions.

DOMAIN	OBJECTIVES	SKILLS AND TERMS
	variety of businesses. •Defines tools and skills. •Lists skills required in specific jobs.	
The Community	•Identifies community jobs. •Describes interdependence among people in living and work environments. •Describes range of job opportunities in a community. •States similarities and differences in unit and assembly line method. •States benefits of good decision-making. •Offers examples of the exchange of money for goods and services. •Describes the flow of money in a community.	•Defines business, unit produc, assembly-line production, resources, teamwork, taxes, services, choice, opportunity cost, goods. •Makes formal observations. •Applies a problem-solving method
The Town	•Defines city, town. •State benefits of planning for economic development. •Identifies jobs within the construction, bank, newspaper and restaurant businesses. •Describes the elements of a newspaper as a communication tool. •States skills required for specific jobs. •States role of bank and completes simple bank transactions. •Describes the interrelationship between producers and consumers.	•Defines town, zones, industry, job, owner, consumer, producer, local economy. •Interprets simple blueprint. •Completes a deposit slip, check, withdrawal slip.
The Region	•Identifies things of value, resources. •Classifies natural, human, technical resources. •Generates list of local resources. •States businesses using the 3 resources. •Describes differences between a good & service •Discriminates between income and expense and tracks the two. •Solves a business problem to maximize profit.	•Defines economy, region, types of resources, products, goods, services, profit. •Conducts research on a business. •Solves a simple business problem. •Interprets data from a business. •Computes business income and expense.
The Nation	•Identifies a partnership, corporation, sole proprietorship. •Lists the natural, human, and capital resources needed to start a business. •States qualities of good employees. •States differences between unit and mass production. •Describes the relationship between productivity and profit. •Writes and evaluates a simple business plan. •Identifies types of advertising.	•Defines sole proprietorship, partnership, corporation, stock, human resource, natural resource, capital resource, product, productivity, profit, unit, mass & batch production, market, advertising. •Writes a business plan. •Executes a business plan as a team member. •Assembles and markets a product. •Draws conclusions based on business data.

DOMAIN	OBJECTIVES	SKILLS AND TERMS
The World	•Defines import and export. •Discriminates between domestic and global trade. •Explains why businesses trade resources, goods and services. •Identify the role of money in trade and make currency conversion.	•Defines trade, import, export, supply, demand, currency. •Discriminate between countries and continents. •Draws conclusions from business and geographic data. •Converts foreign currency to dollars.

Table 2 provides an outline of the career exploration/entrepreneurial curriculum for the junior high level. This curriculum is organized across three domains; the individual, economics, and the global marketplace.

DOMAIN	OBJECTIVES	SKILLS AND TERMS
Personal Economics	•Exhibits interpersonal skills needed in a business environment. •Complete a personal and career interest inventory. •Relate personal and career interests to job opportunities. •Identify career clusters and related educational requirements. •State sources of employment information. •Evaluate themselves on desirable employment characteristics. •Role-play a series of job interviews and evaluate personal performance. •Develop a personal and family budget. •State advantages and disadvantages of forms of savings. •Invest in and monitor a common stock or stock mutual fund. •State the implications of poor credit, use of credit cards, and the role of capacity, collateral and personal values. •Analyze the role of advertising in generic and name-brand products.	•Define career clusters, common stock, mutual fund. •Create a collage to display personal interests and skills. •Construct a notebook on employment information and employment training sources. •Match personal characteristics with those valued by employers. •Complete mock interviews and self-evaluate performance. •Describe the opportunity costs associated with a balanced budget. •Describe the costs, risks, and benefits of various forms of savings. •Describe the costs, risks, and benefits of credit. •Calculate the cost of a loan. •Purchase goods or services based on appropriate shopping principles.
Business Economics	•Identify goods and services frequently purchased •Compete as teams to identify key features of business competition. •Develop a simple business plan for the manufacture of a good. •Calculate the profit margin from the implementation of the business plan. •Develop conclusions on the most efficient approach to the production of a good. •Create supply and demand schedules to determine the "market-clearing price." •Problem solve to help a struggling company improve employee training. •Demonstrate how business expense becomes business income.	•Define private property, competition, price system,sole proprietorships, partnerships, corporation, demand, supply, market price, slogans, CPI, GDP. •Identify funding sources for businesses. •Use supply and demand schedules. •Develop and apply advertising slogans, strategies. •Complete a decision grid to solve a business problem. •Interpret information found in tables, graphs,charts. •Show the relationship between a trained workforce and productivity. •Evaluate the quality of goods and services. •Calculate productivity and profit.

	•State the implications of illegal and unethical business practices.	•List typical business expenses.
Global Economics	•Explain world-wide ties of economic trade. •Use references to discriminate between countries and resources. •Through simulation, make economic decisions regarding food, clothing, and shelter. •Participate in a trade activity to predict imports exports and trade barriers. •Convert dollars to a variety of currencies. •State the relationship between resources and productivity.	•Define interdependence, human, capital, and natural resources, scarcity, economic incentive, absolute and comparative advantage, production,productivity. •State the consequences of trade barriers. •Determine the effects of tariffs and quotas. •Write classified ads for qualified employees.

The Development of Entrepreneurial Skills

While there are a variety of effective vocational training options available to adolescents with disabilities such as vocational high schools, in-school work adjustment programs, and pre-graduation on-the-job placements, these alternatives may be poor matches for a significant number of adolescents with disabilities. Consider the following example. Linda, a sixteen year old student with mild retardation reads on a sixth grade level, calculates on an eighth grade level, and writes on a fifth grade level. Linda lives in a single parent home in a rural town with a population of 1,200 people. The family income is below the poverty line, and there is one car which Linda's mother uses for transportation to her job. Linda's vocational assessment indicates strong interest and ability for food service. Vocational training options include enrollment in the food service program at the regional high school where Linda will spend two or three years preparing institutional-style meals for peers and teachers; on-the-job training at the local diner where Linda will bus tables, serve meals, prepare salads, and make french fries; or entrepreneurial training and an apprenticeship as a baker in the adjacent community where Linda will learn to purchase materials, supply and demand, preparation of goods, interpersonal skills, safety and health regulations, maintenance of business records, and the operation and maintenance of the equipment. Clearly, the entrepreneurial opportunity for Linda provides, potentially, the greatest measure of autonomy and achievement of an economic standard necessary for independent living.

If schools and special educators are to offer entrepreneurial training to adolescents with disabilities, significant attention must be given to the implementation of an entrepreneurial curriculum, collaboration with community entrepreneurs, the infusing of work samples into students' daily work assignments, and training strategies ranging from school-based businesses, shadow experiences, internships, to long-term apprenticeships. The following table provides a summary of the entrepreneurial curriculum suggested for adolescents with disabilities.

DOMAIN	OBJECTIVES	SKILLS AND TERMS
Economics	•Describe the relationship between supply and demand plays and personal choice. •Demonstrate how dollars, goods, and services connect households with businesses. •Demonstrate how business markets assign resources. •Demonstrate how businesses solve	•Define the following terms: scarcity, opportunity costs, incentives, demand, supply, saving, investing, insurance, credit, entrepreneur, stock, bond. •Develop awareness of sources of income, saving and investment strategies. •Develop a plan to finance a business. •Select and invest in a stock, bond, and stock

	economic problems. •Describe how demand affects price. •Describe the consumer's role in market price. •Use the concept of opportunity cost to analyze saving, investing, and personal finance. •List the uses and abuses of credit. •Describe the responsibilities, advantages and disadvantages of the entrepreneurial system. •List the types, advantages and disadvantages of business financing. •Describe the influences on productivity.	mutual fund. •Develop a chart describing the flow of money in a community.
Entrepreneurial Skills	•Construct a business plan for the establishment of a class-run company. •Summarize the duties for each job within the company. •Implement the business plan: Sell stock, produce a good or service, advertise the product, keep financial records. •Set production and sales goals for the good or service produced. •Check for quality control. •Describe how employees' attitudes and skills help or hinder productivity. •Compute the taxes to be paid. •Show how state and federal rules impact productivity. •Explain the company's profits will be distributed.	•Explore career goals. •Participate in team decision-making. •Communicate orally and in writing. •Use computers for maintenance of records, communication, and computational needs. •Apply problem-solving strategies to resolve business problems. •Develop and implement a marketing plan. •Measure profit or loss. •Complete income tax forms. •Participate in company training sessions. •Work as a team member. •Explore career options and related educational experiences. •Examine the relationship between employees' attitudes and productivity.
Internships and Apprenticeships	•Explore career clusters of interest. •Complete a shadow experience with a community volunteer/entrepreneur. •Conduct interviews with community entrepreneurs/mentors. •Construct a personal portfolio containing a resumé, work samples, and letters of recommendation. •Complete an application for an internship with a community entrepreneur. •Set work-related goals and benchmarks to be completed during the internship. •Keep a log of the internship experience. •Complete an application for an apprenticeship with a community entrepreneur. •Set work-related goals and benchmarks to be completed during the apprenticeship. •Keep a log of the apprenticeship experience.	•Measure personal skills and set career-training goals. •Explore career options and gather information about a variety of training plans. •Communicate with community entrepreneurs/ volunteers. •Set training goals for internships and apprenticeships. •Obtain feedback and suggestions on work performance in internships and apprenticeships. •Self-evaluate performance in internships and apprenticeships. •Communicate with mentors and teachers about related academic skills.

The opportunity to develop entrepreneurial skills via internships, apprenticeships, and school-run businesses offers meaningful choices to adolescents with disabilities, but also requires a significant amount of skill and commitment on the part of special educators and school administrators. These educational personnel must:

- understand the context of a rural school and its environment;
- maintain knowledge concerning the state-of-the-art of rural special education;
- understand the differences involved in serving students with disabilities in rural and urban environments;
- maintain knowledge of effective service delivery models for rural students with disabilities;
- maintain awareness of alternate resources to provide services to rural students with disabilities and skills to identify alternate resources;
- exhibit skills in working with citizens and agencies in rural communities to facilitate cooperation between schools and these agencies serving students with disabilities;
- understand personal development skills for professional growth and the techniques to build a local support system in the rural community;
- maintain skills in working with parents of rural students with disabilities; and
- develop skills in working with peer professionals from rural environments.

Summary

While there are several options such as formal vocational training in technical high schools or community-based job placements for adolescents with disabilities, educators need to consider a broader continuum of vocational training options for these students. When entrepreneurial options such as school-based businesses, internships, and apprenticeships are offered to adolescents, these may serve to remedy many of the educational, personal, and rural issues which can contribute to poor vocational preparation, a loss of autonomy and reduced independence for these students. Formal entrepreneurial programs strengthen the ties between schools and community businesses, maximize use of limited community resources, and in the long run, improve the students' sense of self-efficacy and personal control in their lives.

References

Bandura, A. (1997). *Self-efficacy: The exercise of Control.* New York: W.H. Freeman and Company.

Brolin, D.E. (1996). *Life centered career education: A competency based approach* (5th ed.). Reston, Virginia: Council for Exceptional Children.

Carlson, R. (1993). *Developing supplemental funding: Initiatives for rural and small schools.* (Report No. EDO-RC-93-4). Charleston, WV: Appalachia Educational Laboratory.

Coleman, J. (1988). Social capital in the creation of human capital. American Journal of Sociology, 94, S95-S120.

Finley, M. (1994). *Cultivating resilience: An overview for rural educators and parents.* (Report No. EDO-RC-94-5). Charleston, WV: Appalachia Educational Laboratory.

Helge, D. (1992). Special education. In M. W. Galbraith (Ed.) Education in the rural american community. Malabar, FL: Krieger Publishing Company.

Junior Achievement, Inc. (1997). *Guides for consultants and teachers.* Colorado Springs, Colorado: Author

Marrs, L. W. (1984). A bandwagon without music: Preparing rural special educators, Exceptional Children, 50, 361-368.

Nisbet, J., Covert, S., and Schuh, M. (1992). Family involvement in the transition from school to adult life. In F. R. Rusch, L. DeStefano, J. Chadsey-Rusch, L.A. Phelps, and E.M. Szymanski (Eds.) Transition from school to adult life: models, linkages, and policy (pp. 407-424). Sycamore, IL: Sycamore.

Stowers, E. (Ed.). (1996). Extending practice into classrooms: An approach for infusing employability skills training into classroom activities. (Available from Elissa Stowers, IRC Coordinator, Pilasco-Ross Special Education Regional Resource Center, 411 Court Street, Portsmouth, OH 45662).

Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown, L. Brooks, and Associates (Eds.), Career choice and development:Applying contemporary theories to practice (2nd. ed., pp. 197-261). San Francisco: Jossey-Bass.

Szymanski, E. M. (1994). Transition: Life-span and life-space considerations for empowerment. Exceptional Children, 60 (5), 402-410.

BEST COPY AVAILABLE

Lanny Hubbard, Title I Coordinator
Tracy Weiskircher, Parent Involvement Coordinator
Lea Wooldridge, Parent Partnership Coordinator
Lincoln County School System
Stanford, Kentucky

PARENTS AS PARTNERS IN EDUCATION

Parents + Teachers + School = Successful Partnerships

And each agreed he would have failed if he had worked alone. For behind the parent stood the school, and behind the teacher the home. *Anonymous*

Lincoln County, population 21,245, is a rural area located in South Central Kentucky at the foothills of Appalachia. The school system consists of seven elementary schools located in small communities throughout the county, one middle school and one high school which are centrally located. The total student enrollment for 1997-1998 is 3,917. Seventeen percent of students receive special education services. Nearly 50% of adults in Lincoln County are high school drop-outs. Statistics show that 35.7% of Lincoln County children live in poverty. Community resources are limited. The smaller communities within Lincoln County are located 10-15 miles from Stanford. Kentucky ranks last in terms of percentage of adults with less than a ninth grade education. Less than 70% of all Kentucky first graders graduate from high school . In order to change these shocking statistics, the link between family involvement in education and children's academic success must be acknowledged.

Education research has made it clear that parents who are actively involved in their children's learning help their children become more successful learners in and out of school. For too many years the Lincoln County School system had practiced the "Closed door policy". To most parents, involvement meant participating in school fund-raising activities. The Kentucky Supreme Court in June of 1989 ruled the Kentucky public school system unconstitutional. As a result the Kentucky Education Reform Act (KERA) was passed into legislation in

1990. Kentucky's educational system now includes numerous opportunities for active meaningful parent and family involvement (e.g., school-based decision making council (SBDM), primary and preschool programs, and family and youth service centers. A funding formula, referred to as Support Education Excellence in Kentucky (SEEK), is now used to allocate funds. Districts are guaranteed a certain allotment for each student. Additional funds are provided for exceptional students, economically disadvantaged students, and transportation. The gap in per pupil expenditures between low wealth, poverty-poor school districts and high wealth districts has been reduced by over 50 percent since 1988-1990. With the implementation of KERA and the SEEK funds rural schools in Kentucky are no longer under the pressure of just getting by. Mandates from KERA, Early Childhood, and Title I, along with Goals 2000 funds, have provided monies for the purpose of positively involving parents in the education process.

Support for parent involvement within the local district begins with the Board of Education. Lincoln County Board of Education encourages and financially supports parent involvement through professional development, weekly radio school news program, and recognition of volunteers. Superintendent Danny Godbey's focus, in his two years as leader for the school district, has been to bolster each school's effort in developing improved school-community relationships. His annual "Chat with the Superintendent" is an example of his interest in the communities' concerns and opinions. His commitment to encouraging involvement has sparked a rekindling of community interest. Administrators and school staff are motivating parents, families and community member to take an active role in home, classroom, and school activities. Schools in Lincoln County are once again becoming the center of community activities. This was indicated recently by a parent's reply to a recent school survey, "Thanks for giving the school back to the community."

The Lincoln County Early Childhood Program is a fully blended.child development and family literacy program which is comprised of Head Start, Kentucky Preschool "At-Risk" and Disabilities, local Preschool and Even Start. These individual programs are funded through local, state, and federal funds. The comprehensive program includes early childhood development and health services, family and community partnerships, program design and management, and family literacy. The program is committed to establishing partnerships with families to foster the parents' role as the child's primary educator, nurturer and advocate. While parent participation in all aspects of the program is encouraged, all parent involvement is voluntary. The program budget includes a fund for parents to use for activities they plan and implement. Each classroom has a parent center advisory committee which meets bimonthly. The committee makes recommendations for the use of activity funds to the Policy Council. The Policy Council is the governing body for the Early Childhood program which is comprised of parents representing the seven elementary schools.

The Title I Program compliments Kentucky's educational reform because it also emphasizes high academic standards with an aligned curriculum and assessment. The focus of Title I is on helping disadvantaged students meet the same high standards expected of all children. An extremely important part of Title I reconstruction is parental involvement. School staff and parents develop parental involvement policies which include school compacts. School compacts spell out the goals, expectations, and shared responsibilities of schools and parents as partners seeking student success. Districts with a budget greater than $500,000 allocate 1% of their budget toward the promotion of parent involvement. Both Early Childhood and Title I are designed to meet the needs of Lincoln County's families by building linkages and partnerships with other service providers and leaders in the community.

Parents first contact with the school system is through involvement in the Early Childhood program. They are encouraged to attend bimonthly Parent Advisory Groups and monthly district parent workshops. Other types of involvement includes membership on the Head Start Policy Council, volunteering with classroom activities, and working on PACT (Parent and Child Together) activities at home through Family Partnership Agreements which allow parents to set individual and/or family goals . Participation in these activities encourages and develops a feeling of partnership in the education of their children.

In 1995, the Lincoln County School System realized the need for intensifying the parents role in education and building on the foundation laid by the Early Childhood Program. Title 1 funds were budgeted to include a parent partnership coordinator. Linking the two programs has resulted in a marked increase in continued parent, as well as community involvement. Training is offered to orientate parents to volunteering n the school setting at the beginning of each school year. Early Childhood and Title I have combined efforts to establish a rapport with parents to smooth the transition into the primary and intermediate program. Through collaboration with other groups, Agencies Caring for Kids has been formed and conducts regularly scheduled workshops on a variety of subjects related to effective parenting. In the past, barriers to parents participation in workshops has been communication, child care and transportation. Sharing responsibilities, resources, and costs is aiding in overcoming these barriers.

Records show that more than 600 parent and community volunteers put in approximately 15,000 hours in the 1996-97 school year. This adds up to a conservative savings of $100,000 for the school system. The volunteer program benefits families as much or more as the district. As a result of volunteering, Sally L. was motivated to earn her GED and is now employed as a substitute instructional assistant. This Waynesburg Elementary mom received statewide recognition in 1997, winning the Kentucky Governor's Volunteer Service Award. Also at Waynesburg, parents and staff worked together to create an attractive, serene outdoor reading garden which the entire school and community can enjoy.

Cheri M., a young mother of three, began her volunteer activities in the Head Start Program at Crab Orchard Elementary. She continued this practice into the primary grades, along with holding both local and district offices in PTA. In 1996, Cheri was named Kentucky's Outstanding Elementary School Volunteer. Her involvement in the classroom gave her the incentive and courage to apply for financial assistance in furthering her education. She is currently a sophomore in college working toward her goal of becoming an elementary teacher.

"Having committed family volunteers in our school every day has directly impacted our school climate and played an important part in significantly raising schoolwide reading scores", states Kings Mountain Elementary Principal Ron D. Parents receiving aid to dependent children satisfy part of their required work time by direct classroom interaction with their own children. They are not only fulfilling their work requirement, but are developing positive parenting skills as well.

Judy A., primary teacher at Stanford Elementary, utilizes parents in and out of the classroom. Parents spend their lunch hour once a month acting as "Reading Buddies" with their children. Those who cannot come to the classroom spend volunteer time at home preparing skill building materials for various unit studies.

Parents of students at Hustonville Elementary are kept involved and informed daily through the school's home page on the internet. Homework assignments as well as upcoming events are posted daily to further link the home and the school.

Making parents partners in education has strengthened the school, the home and the community. Lincoln County students have a more positive attitude, increased confidence and are better prepared for their future as a result of their parents and teachers becoming partners in their education.

References:

Kentucky Board of Education Policy Statement

Kentucky Schools Update 1996-1997 Prichard Committee

National Education Association *Parent Power*

Wilfred D. Wienke, Ed.D
West Virginia University
Kevin J. Miller, Ed.D
St. Bonaventure University

PREPARING GENERAL EDUCATORS TO SERVE STUDENTS WITH LEARNING DISABILITIES: RURAL CLASSROOM APPLICATIONS

Background. The general education classroom has become a setting of ever increasing importance for children with disabilities. A larger number of children with disabilities are receiving all or part of their instruction in the regular education setting. Over 95 percent of children with disabilities attend regular schools. Of the 4.9 million students ages 6 through 21 with disabilities during the 1994-95 school year, 2.2 million spent 80 percent or more of their school day in general education classrooms (U.S.D.O.E.,1997). In relation to other educational settings, inclusive schooling has grown much more dramatically in rural schools(Capper & Larkin,1992; Mallory & Berkeley, 1988; Templeman, Frederick & Udel, 1989). Over 78 percent of children with learning disabilities receive all or part of their instructional programs in general education classrooms. If analyzed by category, it is found that children with learning disabilities receive a much greater portion of their instruction in the general education classroom than all students except those with speech and language disabilities. For example, during the 1994-95 period, only 9.7 percent of students with mental retardation received their instruction in regular class placements. Hence, the regular classroom teacher is very likely to have responsibility for serving numerous students with learning disabilities.

In rural West Virginia, State Policy 2419, Regulations for the Education of Exceptional Students (West Virginia Department of Special Education, 1990),provided major emphasis to "non-pullout" instruction for students identified as having disabilities. While this policy has been in effect since 1990, a monitoring report by the U.S. Department of Education (1994) found that an area of concern in West Virginia was assurance that pupils are appropriately placed in the least restrictive environment. Acting on this information, the West Virginia Legislature in 1994 passed legislation dealing with the inclusion of students with disabilities in regular education classrooms.
The provisions of this bill mandate that: 1) school Faculty Senates must develop a strategic plan for inclusion in their school, 2) there must be

increased participation of regular education teachers in the IEP process, and 3) specific training for regular educators to meet the needs of students with disabilities in the regular classroom must be provided.

Project Focus. In an attempt to meet the need for preparation of general educators to serve students with disabilities, the Department of Special Education at West Virginia University designed a course of studies for rural general educators which leads to teacher certification in learning disabilities. Learning disabilities was chosen because general education teachers are most apt to be responsible for serving students with an academic disability in this category (U.S.D.O.E.,1997). Teacher certification in West Virginia is categorical and therefore learning disabilities was the best match for the certification structure.

The course of studies for rural general educators was crafted as a project and achieved federal funding from the U.S. Office of Special Education. The major goals of the project are: 1) to increase the knowledge and skills of functioning general education teachers through training leading to full certification in area of learning disabilities, and 2) to provide trainees with the skills and competencies needed for a facilitative role to involve all educators and parents in preparing for and implementing responsible inclusive practices. Several requirements were agreed upon as measures for enhancing the successful implementation of this project: 1) rural general education teachers within entire schools were targeted for certification training in learning disabilities, and leadership skills in inclusive practices, 2) the selected rural general education teachers must be fully employed while engaged in the program of studies, 3) program competencies must be demonstrated in the teacher's home school and in their own general education classroom with the assumption that the effects of the program would become institutionalized, and 4) that parents be involved as part of the training, including the preparation of training materials.

Training Leading to Certification. The project provides NCATE approved coursework required for teacher certification in learning disabilities in our Special Education Program. Included are four core courses followed by two courses focusing on learning disabilities. There are two teaching practicums. One is carried out in conjunction with methods related courses, and one serves as a final teaching practicum . A major innovative aspect of this teacher training model is the way applied course assignments are integrated with the coursework. Courses included in this project have all been modified to include applied assignments which are designed to be carried out in the general education classroom.

The courses and practica experiences in this project are designed to assure trainee competence in planning and implementing instruction using the most current effective practices for delivering instruction in the general education classroom to students with learning disabilities. Achieving a better relationship between theory and practice is a major principle guiding the implementation of this project.

Applied Assignments Within Coursework Each of the courses provided assignments which required the application of specific methods or procedures in the general education classroom. In some instances the assignments required application only with the children with learning disabilities and in other cases they required application with the entire class with a focus on modifications for specific students as needed or as indicated in their IEP as available to the teacher. Teachers were urged to provide accommodations for all students who had specific learning needs, and not limit their attention only to students with an identified learning disability. Brief examples of applied assignments and their respective courses are provided to help clarify the approach taken in the project.

Introduction to Special Education Design and implement a one week instructional program for a subject which you teach. This must include detailed lesson plans using the format which you will encounter during practicum, including behavioral objectives, activities, materials, and a plan for evaluation. Specific modifications/accommodations and alternative assignments must be described for students with disabilities in your class. Begin with an instructionally relevant detailed description of the target students with disabilities. Conclude with a description of the outcome and a reflection on the impact of the instruction provided.

Curriculum and Methods Develop and implement a learning package suitable for the students in your classroom, including specific attention to the learning needs of your students with learning disabilities. An abstract of the learning package will be submitted and approved in advance of implementation. Follow the lesson plan format prescribed for practicum, being sure to fully describe adaptions or accommodations planned for the students with disabilities, including plans for reteaching in areas where mastery was not achieved. Include teacher made support materials. Copies of the learning packet along with entries on the prescribed reflective response log must be submitted following implementation.

Assessment in Special Education Prepare an IEP for a student with an identified learning disability. You must select and use the forms approved and used in your county. If you have not been involved in administering the required assessments, you must interview the person(s) who did administer the assessments and discuss the outcomes which were relevant to the IEP. Along with the IEP provide a statement reflecting your experience with the process.

Classroom and Behavior Management Design and implement a behavior management intervention with a student in your classroom. Follow the prescribed format being sure to include identification of student need and target behavior, specify the intervention strategy and data taking mechanism. Provide a report describing the aforementioned elements, charted data depicting the results, and a narrative description of the results. Include a statement of your reflection on the process.

Introduction to Learning Disabilities Targeting students with learning disabilities or other special learning needs, design and implement a series of five lessons using direct instruction following the principles and processes provided in class. Be sure to specify the specific learning needs of the target group, describing the linkage of the lessons with the student needs. Provide a report including the aforementioned information plus the outcome data, and finally a personal statement of reflection on the process as implemented.

Teaching Strategies in Learning Disabilities Design and implement a learning strategy for a small group of students in your classroom, focusing on students with learning disabilities plus at-risk students in need of special instructional attention. Follow the guidelines and use the Deshler text as you prepare and implement the strategy. An abstract of the strategy must be approved by the instructor in advance of implementation. Provide a report including a description of the students and their learning needs, the instructional materials developed/selected and implemented, outcomes of the instruction including any reteach plans. Finally, a reflective log focusing on your experiences should be included.

Impact The applied assignments were very successful in preparing these experienced general educators to provide effective instructional programs for students with learning disabilities in their classrooms. Their comments indicated that they believed the instruction which they encountered in the project was meaningful because it focused on direct application in their classrooms. They viewed the course of studies as distinctly different from prior coursework because of the immediate theory to practice approach. They also indicated that post-instruction they felt much more comfortable and confident in planning and implementing instruction for their students with learning disabilities as well as other at risk students under their responsibility.

Over a three year period this project will prepare a maximum of 40 general educators to achieve teacher certification in learning disabilities. They will demonstrate competency in planning, implementing and evaluating instruction in general education settings for students with identified learning disabilities. In addition, they will demonstrate competency in preparing and implementing instruction for the academically at-risk students in their classrooms. The participants were primarily experienced teachers and as such will probably remain in their respective rural counties providing excellent service to all the students in their classrooms. The impact of this project is judged to be highly significant given the investment by all those involved in the enterprise.

References

Capper,C.A., & Larkin,J.(1992). The regular education iniative:Educational reorganization for rural school districts. Journal of School Leadership, 2, 232-245.

Mallory,B., & Berkeley,T. (1988). The relationship between rural characteristics and the preparation of early childhood educators. Rural Special Education Quarterly, 7, 1-5.

Templeman,T., Fredericks,H., & Udel,T. (1989). Integration of children with moderate and severe handicaps into a day care center. Journal of Early Intervention, 13, 315-328.

U.S. Department of Education. (1997). To assure the free appropriate public education of all children with disabilities: Seventeenth annual report to Congress on the implementation of The Individuals with Disabilities Education Act. Washington,D.C.:U.S.Government Printing Office.

West Virginia Department of Education. (1990). State Policy 2419: Regulations for the Education of Exceptional Students. Charleston, WV: Author.

This project was funded by the Office of Special Education, United States Department of Education, CFDA84.029G, Opinions expressed here may only be attributed to the authors of the manuscript.

Mary V. Compton, Angie Stratton, Ali Maier,
Charice Meyers, Holly Scott, & Tammy Tomlinson;
University of North Carolina at Greensboro
Greensboro, NC

IT TAKES TWO: CO-TEACHING FOR DEAF AND HARD OF HEARING STUDENTS IN RURAL SCHOOLS

Introduction

Since the implementation of P. L. 94-142 (1975) and the Individuals with Disabilities Education Act (1992) and its Re-authorization (1997), the number of deaf and hard of hearing students who are enrolled in general education classes has escalated (Moores, 1991; Davila, 1992). Moreover, the low incidence of students with hearing impairments who live in rural areas represents challenges to administrators, regular educators, and teachers of deaf and hard of hearing students who are charged with providing appropriate educational services for these students. Thus, Boyle (1988) characterizes teaching students who are deaf and hard of hearing in rural settings as both a challenge and an "awesome responsibility" (p. 134). Fulfilling this responsibility necessitates collaboration between the rural educator and the teacher of the deaf that may not have been emphasized in each professional's preparation. An innovative solution to this challenge that incorporates professional and interpersonal collaboration is *co-teaching*.

Co-Teaching

Both general and special education teachers are finding it necessary to create alternative service delivery approaches due to changing philosophies concerning the educational needs of students with disabilities. In addition, restructuring movements have increased the impetus for expanding the use of inclusive practices in schools (The National Commission on Teaching and America's Future, 1996; Joseph P. Kennedy, Jr. Foundation, 1997). Co-teaching as explained by Reddit (1991) and Friend, Reising and Cook (1993) constitutes a viable approach to providing educational services to students with disabilities who are educated in inclusive settings. Although limited empirical research has been completed to document the effects of co-teaching, Pugach and Johnson (1995) cite co-teaching as "...one of the most powerful manifestations of professional collaboration" (p. 193). Cook and Friend (1995) state co-teaching occurs when "two or more professionals jointly deliver substantive instruction to a diverse, or blended, group of students in a single physical space" (p. 1). According to this definition of co-teaching, two or more professionals refers to individuals with appropriate credentials, meaning two teachers or a teacher and a related services professional. Jointly delivering instruction refers to both professionals collaborating and delivering content information, with both individuals taking active roles in teaching. And lastly, a diverse or blended group of students includes students with special needs. Consequently, co-teaching provides opportunities to implement more beneficial instructional interventions utilizing another set of hands and eyes, as well as, lowering the teacher-student ratio. Four points in support of co-teaching learning environments for students with special needs for have been identified (Cook & Friend, 1996 a; 1996 b). One point emphasizes that co-teaching increases instructional options for all students by means of bringing the strengths of two teachers with different expertise together. Point Two advocates that co-teaching improves program intensity and continuity by providing opportunities for students to receive in-depth instruction because they become more involved in their learning with two teachers present. The intensity and continuity feature of co-teaching is advantageous for students with special needs due to the reduction of the student-teacher ratio which enables students to spend more time in one instructional environment rather than leaving the general education classroom for services. The third point affirming co-teaching focuses on reducing the stigma for students with special needs because negative attributes are often associated with students' receiving services outside of the general classroom. This point is supported by evidence suggesting that students prefer to receive support services in the classroom with their peers (Walsh, 1992). A fourth point that validates co-teaching focuses on the opportunities it presents to foster mutual support among professionals so that co-teachers can work together to more sensitively determine and meet students' needs.

Five Models of Co-Teaching

1. One Teaching/One Assisting
   In this model, both educators are present, but one takes a clear lead in the classroom while the other observes students or drifts around the room, assisting students as needed. Limited teacher planning is required for this model. It is suggested that the teachers alternate the lead role to avoid the teacher assisting from appearing to be a glorified Teacher Aide.

2. Station Teaching
   This approach requires teachers to share responsibilities for planning, although instruction is delivered in separate locations within the classroom. Teachers divide the instructional content into two or more segments and teach at separate locations in the room. In this model, special needs students can be integrated rather than pulled out. However, with this model, pacing and classroom noise levels become issues of concern.

3. Parallel Teaching
   Teachers plan instruction jointly, but each presents the material to a heterogeneous group composed of half the class which allows for a lower student-teacher ratio. In Parallel Teaching, students receive the same amount of instruction in approximately the same amount of time.

4. Alternative Teaching
   In this model, one teacher works with a small group while the other teacher

instructs a large group. Some examples of Alternative Teaching encompass pre-teaching, re-teaching, enrichment, assessment, and guiding interest groups.

5. Team Teaching
In this model, both teachers share instruction; for example, they take turns leading a discussion, or one may speak while the other demonstrates a concept. It is necessary for the teachers to have a high level of mutual trust and commitment for this model to be effective.

Preparing Pre-service Teachers of Deaf and Hard of Hearing Students for Co-Teaching in Rural Schools

The Education of Deaf Children Program at the University of North Carolina at Greensboro (UNCG) is implementing a 3-year personnel preparation grant from the US Department of Education (Award #H029A50026), that offers specialized pre-service teacher education to prepare licensed teachers in hearing impairment for rural schools. As part of their course of study, students complete a 3-hour course in collaboration and co-teaching (EDC 456 Rural Education II) and apply this knowledge during their 15-week student teaching internships in rural schools. The Program Coordinator establishes internship placements in rural schools with cooperating teachers who either have experience with co-teaching or who indicate a willingness to implement co-teaching approaches.

Co-Teaching in Student Teaching Internships with Deaf and Hard of Hearing Students

A variety of co-teaching approaches have been implemented in rural teaching sites during the past three academic years. All of the student teachers participating in the rural grant practiced the One Teaching/One Assisting model throughout their internship. Both the student teacher and the cooperating teacher were lead teachers with the other one providing support.

Station Teaching was more commonly used in elementary level school internships. For example, the cooperating teacher and the student teacher jointly planned reading or math lessons and divided the instructional content. This approach addressed the issue of equal teacher status because both teachers took active roles in instructional presentation. Effective Station Teaching at the high school level involved a student teacher in a food and nutrition class. In this approach, the cooperating teacher presented textbook material to a group of students while the student teacher worked with a group on food preparation in the kitchen.

The Alternative Teaching approach was utilized in most of the co-teaching situations experienced by the interns. It proved to be an extremely effective way of meeting the needs of many of the students in the classroom, not only deaf or hard of hearing students. Through pre-teaching, re-teaching, or making visual-graphic modifications for the deaf or hard of hearing students, students with learning differences and processing challenges received content information more readily.

Team Teaching was practiced in a variety of internships, including elementary, middle, and high school classrooms. An effective Team Teaching practice took place in a World Geography class in which the cooperating teacher possessed greater depth of content knowledge; whereas, the student teacher's strengths were in her knowledge of technology and how to present content material through visual and graphic displays. Another student teacher co-taught demonstrating the Team Teaching approach in a first grade reading class. In this application, both the cooperating teacher and the student teacher planned the reading lesson together and shared instruction time simultaneously.

During the spring 1998 semester, two student teachers are participating in co-teaching settings. One internship emphasizes the collaboration of an exceptional children's teacher and the UNCG student teacher, to serve students in a kindergarten class. The two teachers spend a great deal of time planning collaboratively, developing teaching materials and devising instructional strategies to better meet the needs of all of the students in the classroom. Co-teaching approaches, including Alternative Teaching, Station Teaching, and Parallel Teaching are being implemented in this particular rural kindergarten class. The second internship is in a Head Start/Exceptional Children's preschool. The cooperating teacher plans jointly with the student teacher. While One Teaching/One Assisting is demonstrated periodically in this preschool room, Team Teaching is also implemented. Alternative Teaching is being used, not only with the deaf student, but with other students in the program as well. The cooperating teacher and student teacher are taking advantage of Station Teaching which they have found to be ideal for their rural preschool setting.

Results of Interviews with Co-Teaching Cooperating Teachers

The students currently participating in the grant award conducted telephone interviews with nine regular classroom teachers who served as cooperating teachers for graduates of the program from spring 1996 until fall 1997. The interviews solicited input concerning the teachers' perceptions of the positive and negative aspects of co-teaching with a student teaching intern of deaf and hard of hearing students.

The cooperating teachers as a group expressed a greater number of positive than negative comments about co-teaching. Each teacher noted that the addition of a second teacher in the classroom enabled both the normally hearing and deaf and hard of hearing students to receive increased reinforcement and feedback as well as decreasing lag time in the teachers' responding to students' questions during group and guided practice learning activities. Thus, twice as many students could be worked with and their individual needs were attended to with greater specificity in a more timely manner than if the cooperating teachers were teaching by themselves.

In a particularly successful Team Teaching application in which the cooperating teacher and UNCG student intern shared a high level of collegiality, the cooperating teacher voiced that she and the intern readily "picked up where the other left off", so that the teacher input and guided practice portions of lessons flowed more smoothly than in lessons presented by a single teacher. Each cooperating teacher welcomed the expertise in deafness demonstrated by their intern with regard to the interns' abilities to modify and adapt teaching styles and materials as well as vocabulary and syntax. Such modifications were universally felt to be advantageous for all students. Several cooperating teachers commented that their interns sharing their expertise and experiences concerning deafness "enriched" both their own and their normally hearing students' understanding of deafness and deaf culture, so that they felt more comfortable interacting with students with impaired hearing during and after class. In one high school setting, a cooperating teacher disclosed that she was grateful that the student teacher was a positive influence in alleviating a deaf student's extreme shyness and insecurity. The student did not interact with her hearing peers at all at the beginning of the semester; however, as the semester progressed, she gained so much self-confidence that she shared how it felt to have impaired hearing in an address to her classmates. The cooperating teacher expressed that the student would not have done so without the presence and participation of the student teaching intern. This same intern was praised for her ability to introduce the cooperating teacher to strategies to integrate technology in her teaching through the use of Internet activities.

Several cooperating teachers disclosed that they became more reflective of their own teaching styles due to co-teaching with their interns. One teacher with twenty years of experience stated that she did not expect co-teaching to alter her firmly established teaching style; however, she expressed that she felt more comfortable in modifying lessons to include special needs students.

Primary among the negative aspects of co-teaching mentioned by the cooperating teachers was the issue of planning. One cooperating teacher observed that it was difficult to prepare one lesson with several different plans for students of divergent achievement levels in a single class. Other cooperating teachers added that planning time was inadequate and that it was problematic for an intern in a secondary school placement to prepare detailed lessons for a content subject in which she had not been schooled. Several cooperating teachers mentioned that it was difficult for their students to adjust to the presence of two authority figures in simultaneous control of the classroom. This shared control often resulted in the students "playing one teacher against the other"; whereas, some students were distracted by the presence of two teachers.

Overall, the perceptions expressed by the cooperating teachers reveal that co-teaching with a student intern was a positive experience. The negative aspects disclosed in the interviews reflect areas of concern previously reported in the literature on co-teaching (Bauwens & Hourcade, 1991). The results of the interviews suggest that as a greater number of regular educators engage in co-teaching with teachers of deaf and hard of hearing students in rural settings, their teaching and their reflections on their teaching will be enriched. As one cooperating teacher advised, "Four hands and two heads are better than one."

References

Bauwens, J., & Hourcade, J. (1991). Making co-teaching a mainstreaming strategy. *Preventing School Failure, 35 (4),* 19-24.

Boyle, H. (1988). New directions in resources for special needs hearing impaired students: Outreach '88. *Proceedings of the 8th Annual Southeast Regional Summer Conference.* Cave Springs, Ga.

Cook, L., & Friend, M. (1996). Co-teaching: Guidelines for creating effective practices. In E. L. Meyen, G. A. Vergason, & R. J. Whelan (Eds.), *Strategies for teaching exceptional children in inclusive settings.* (pp. 155-182). Denver, CO: Love Publishing Co.

Davila, R. (1992). An agent for educational program development for deaf and hard-of-hearing students. Paper presented at the conference on Deafness and Hearing Loss, Raleigh, NC, April.

Friend, M. & Cook, L. (1996 a). *Interactions: Collaboration skills for school professionals.* White Plains, NY: Longman Publishers USA.

Friend, M. & Cook, L. (1996 b). *The power of 2: Making a difference through co-teaching.* [Video and Facilitator's Manual]. Bloomington, IN: CASE Research Center.

Friend, M., Reising, M., Cook, L. (1993). Co-teaching: An overview of the past, and considerations for the future. *Preventing School Failure, 37 (4),* 5-10.

Joseph P. Kennedy, Jr. Foundation. (1997, January). *Building Partnerships: Preparing Special Education Teachers for the 21st Century.* Author.

Moores, D. (1991). *Dissemination of a model to create least restrictive environments for deaf students.* (Project No. 84133) Washington, DC: National Institute on Disability and Rehabilitation Research, US.

The National Commission on Teaching and America's Future. (1996, September.) *What matters most: Teaching for America's future.* New York: Author.

Pugach, M., & Johnson, L. (1995). *Collaborative practitioners, collaborative schools.* Denver, CO: Love Publishing Co.

Reddit, S. (1991). Two teachers working as one. *Equity and Choice, Fall,* 48-58.

Walsh, J. (1992). Student, teacher, and parent preference for less restrictive special education models - cooperative teaching. *Case in Point, 6 (2),* 1-12.

DEVELOPING INTERACTION IN COMPUTER MEDIATED LEARNING*

Kay Sather Bull
Sarah L. Kimball
Susan Stansberry
Oklahoma State University

INTRODUCTION

Asynchronous computer mediated learning (CML) provides a mechanism for interaction which is unique among educational delivery systems. Some argue that this makes no difference in student learning. Others believe that technology can improve learning. We take the latter course. In this paper we will look at constructivist learning in CML settings, collaborative learning, the development of interaction (psychological, motivational, and teaching practices), teaching using collaborative learning, and the development of intergenerational communities.

Networked learning is a shared interactive way of thinking according to Levin (1995). It promotes collaborative interactive learning which leads to deeper learning than is typically possible without interaction between learners. When groups of learners think together, following their own interests, they may become more knowledgeable than the teacher in narrow areas. Potentially, this is where interactive CML may lead us.

CONSTRUCTIVIST LEARNING

Content Is Embedded in Culture: What we know is a function of the perceptions which are shared with us by members of our culture. We use what we learn in a social framework to interpret and make sense out of new material. We, as children, start to learn socially from our families and from our friends, and the way we interpret and what we know about the world is a function of this learning.

Learning as Social Construction: Constructivitist learning is based on the premise that each learner constructs his/her own learning by interacting with information and the environment. Learners do this by relating new information to the information which they already possess. (For a glossary of knowledge construction see http://www.cs.colorado.edu/~ostwald/glossaries/kc-glossary.html). New information is either added to the knowledge structure (assimilated) or it is added and it changes the structure because it causes new insight or creates other relationships which were not identified before (accommodated). Learning is assumed to be an active/interactive process in which the learner does something meaningful with the information and thereby transforms it into personal knowledge.

Learners Initiate Interaction: Those who interact in a social constructivist setting have the possibility of learning. Learning is driven by the participant's social needs to interact. What the learners know influences strongly the ways in which they can and are willing to participate in a learning community. A learning community is assumed in a social-constructive environment. Participation in socio-cultural processes changes as the learners grow physically, affectively, and cognitively. Learners and their knowledge are transformed by social interaction.

Development of Constructions (Schema) in CML: Early constructions in CML may not accurately represent reality, particularly in settings where the information being transformed is not firmly grounded in previous learning and understanding. This incomplete initial transformation lends some understanding to the difficulty that beginners have in using information that is not learned in an initially experiential way. As learners transforms the information and more and more information is assimilated, the constructions become more realistic, more differentiated, and more complex. Asynchronous CML interaction refines construction of new knowledge.

Authentic Learning: Environments which are real and have meaning to the potential learner promote learning (see http://spiders.arizona.edu/ salticidae/salticidae.html). Authentic learning settings, in which the learner can see how the information to be learned will relate to something that is real to the learner, engage learners and promote a passion for problem solving. Learners can transfer knowledge and problem solving strategies within the domain of knowledge if the learning is interested based and authentic. Interactive problem solving is facilitated in CML.

Scaffolding Defined: Scaffolding in CML is an interactive process by which a learner is assisted by others (teachers or peers) to acquire knowledge or skill which cannot be acquired without assistance at that point in time and skill. Understanding is determined by the previous experiences of the learner, past knowledge and the ways in which previous information has been stored (memory structures determine how new information will be assimilated or accommodated). Learners seldom come to a learning setting with the same background knowledge and discourse history. Differences can be scaffolded in CML hypertext. Even if learners have the same background knowledge they are likely, because of other factors such as, interest, intelligence, etc., to move through the material at different rates of speed. This can be accommodated by CML tracking. Tracking can be seen as a form of pedagogical scaffolding. Through the collaborative process of scaffolding the true intersubjectivity of learning is developed where all parties share understanding of the task and work together to co-construct meaning and understanding.

---

*An expanded copy of this paper and its presentation are available at http://home.okstate.edu/conference.

Mutual Articulation of Meaning: Teachers and collaborative peers interact to weave complex information into new knowledge with (not for) the learner. This process is one of mutual articulation of meaning. Most information with which learners come in contact with has been created by others; little is discovered knowledge. Because information is created by others, it is shared in a social sense either by interaction between people or by their surrogates, e.g., books. As learners interact they transform this information into knowledge through interaction.

Scaffolding in the Zone of Proximal Development: Only some learners are ready to learn individually or with support at any given level. These learners are in the zone of proximal development, according to Vygotsky (1978). To be able to learn from particular information, a learner must have sufficient background knowledge to be able (with help) to start to process the new information into personal knowledge (see http://edweb.sdsu.edu/people/bdodge/scaffolding.html). Scaffolding can be provided at a variety of levels, depending on how close the learner is to being able to function independently. If the learner knows only a little, the scaffolder may need to model the complete act including describing personal thinking as the process unfolds. At a somewhat higher level of learner understanding, the scaffolder can have the learner model the process with assistance. Here the learner tries to perform and receives prompts or hints from the coach as the process unfolds. At a third level the scaffolder only has to identify the components which the learner should work with to start the process which the learner can then accomplish with little external assistance. At the final level the scaffolder only has to name the technique which should be use for the task to be accomplished. This last step is analogous to problem finding, or conditional knowledge, in the sense that the learner knows how to apply the knowledge but is unsure of when to use it or its appropriateness to a particular problem.

Principles of Constructivist Teaching: Start by focusing on local (learner) issues. Seek out learner questions and ideas as the basis for learning tasks, objectives, and goals. Follow the learner's interests. Encouraging learner initiation of ideas gets them involved, interested, and makes them owners of the process. Seek out real problems to work on-ones in which interest the learners. Learners should be encouraged to use alternative sources of information to insure that the outcomes are not biased and represent only a single perspective. Let the learners initiate the search for information (the Internet may be a good source). Make learning a collaborative process by having the learners discuss the information with each other as they transform information into knowledge. Learners should be encouraged to challenge alternative conceptualizations and ideas. This use of multiple perspectives in information discussion leads to deeper understanding and potentially to, understanding the assumptions one makes in learning, thus transforming learning. Learners should make predictions of the outcomes of solutions will be and then validate these predictions through the collection of evidence. When there are alternative perspectives, the learners should debate the choices and evaluate the final selection. Learners should reflect on possible solutions for problems, considering the risks, consequences, and effects of the solutions after decisions have been made. This is done through a process of self-analysis and reflection. Teachers should not try to have participants transfer the knowledge to other tasks and settings without guided application and facilitation so that the learners come to associate the new task or setting with the old knowledge.

COLLABORATIVE LEARNING

Collaboration Defined: Collaboration involves the development of communities, where groups or pairs of learners interact to learn and solve authentic problems. Collaboration fosters constructive learning. Collaborators can include learners, teachers, mentors, and researchers or others with whom a learner can develop a reciprocal interactive relationship. Interaction with peers and teachers supports question refinement and reflection, promotes a shared discourse, and establishes a learner culture which fosters cooperation and mutual interdependence. That is, the learning process becomes more like the real world in a professional sense. Common understandings result from social negotiation in collaboration. For a program on collaboration see http://wwwascusc.org/jcmc/vol2/issue3/.

Communities of Practice: One of the purposes of collaborative CML is to create communities of practice. A community of practice is a group which works together and shares beliefs, values and goals. As learners are integrated into the group they establish through practice a shared identity with other group members. We start with a group which shares similar goals and interests (this cannot be externally imposed). Members of the group determine the goals of the group on a particular project or activity. Then they work with others toward the common goal. This is the basis for the guild hall and the apprenticeship learning process and is the foundation for collaborative learning. In collaborative CML there are no lurkers or free riders. One of the first things a group must do is to develop a commonly accepted knowledge base. This is usually developed by discussion of ideas related to the goals of the group. There is a socialization process which groups go through in the development of ritual communication, which is necessary for the development of collaborative communities. Community members use common tools and practices which are mutually agreed upon, and they learn as they are doing. Learners use reciprocal teaching, employ flexible turn taking, and distribute tasks to individuals as well as doing group work. This mutual regulation leads to the development of metaknowledge about the community. Collaborative decision making and strategic decisions raise arguments and requests for explanation. As communities develop their product or solution, they reflect on what they create and try to make it better. This reflection, which comes about as part of participation, is generated because each member must think about what others have proposed as well as that which they have created themselves. To integrate new members into communities of practice, teachers will help by helping them learn the common language of the discipline and by securing new learners invitations to the existing group. Learners emulate behavioral models where the beginners model the practices of the more skilled and the young model the practice of those who are older. The best of the same age or cohort are the eventual models. In this way information is transformed into knowledge and the social fabric of the culture is passed from one generation of learners to the next.

Functional Skills in Collaborative Learning: Learners should be taught the following functional skills in the collaborative process. Take turns, particularly if operating in a synchronous environment. Contribute your ideas, share what you know with others. Support your points with evidence, new information must be believable to others. Ask for help when you need it. Encourage others to contribute, this promotes the interaction of diverse opinions and improves collective thinking. Complement others' contributions. This will increase the frequency with which they respond. Check for understanding, both yours when new information is presented to you, and that of others, when you present information to them. Keep group members focused on the task. This will help you accomplish the task and will make the outcomes more meaningful and cohesive to all.

Peer Exchanges: In collaborative learning, interaction with peers provides motivation (others have the same problems that you do), support (many will try to help you when you get stuck), help (peers, once they are into collaboration, realize that helping others is a benefit for them. In addition it may be reciprocated. Groups have a collective intelligence that is lowered if some members do not understand and participate), encouragement [everything from verbal high fives when a breakthrough is made to smiles shown as :-)], assistance (many activities need two or more players to accomplish them; collaborators provide themselves), exchanges of information (we all learn as we share), and finally, challenging facts and assumptions (we all get it wrong or misunderstand it sometimes). Groups will confront ineffective strategies and misconceptions. This helps learners to clarify their thinking and produces a better understanding of the information in the long run. By collaborating we learn cooperative work skills and learn the give and take of interaction. This is necessary for many who have a public school background because these skills are seldom used in traditional classrooms. Collaboration builds on the strengths of each learner as those who are good at certain topics will do the majority of the leading in these areas. Other learners will move to the fore as their strengths are needed. Collaboration allows us to play multiple roles in learning.

Reciprocal Teaching: Reciprocal teaching in CML is one of the major processes in collaboration. Learners share meanings, they share necessary information which is transformed into knowledge, and they share conceptualizations and conclusions. All learners know the problem that they are trying to solve and each learner helps other learners by teaching what he/she knows. There is a shared problem context where they provide each other reciprocal scaffolding as all take turns teaching the group. In some cases this may be as simple as reading something (possibly from a reading list) that others have not read. The reader can lead the discussion on the new information and teach his/her peers. In this way learners are both producers and critics of the work in progress and they learn self monitoring in the process. Reciprocal teaching is a process of social interaction which promotes knowledge development and knowledge is a socially developed product. In the reciprocal teaching process the teacher should stress the idea of interdependence. Mediated discussions, like those in reciprocal teaching are realistic, relevant, credible, and technically stimulating.

DEVELOPING INTERACTION

Coaching in Collaborative CML: Coaching in CML, a subset of scaffolding, is a process of providing hints, cues, and feedback. It can be accomplished by peers or teachers. The coach observes the learner and provides scaffolding when it is needed. Not too much coaching should be given. If a coach is providing most of the activity the learner may not be at the appropriate development level in terms of this particular content. Coaching can be

used to provide, or remind about the use of a strategy or technique, as well as the direct teaching or modeling of the technique by the coach. When coaching is done the learner should retain control of the activity as it is assumed that the learner will maintain
responsibility for the learning.

Collaboration under Control: Collaboration is not always done in a learner centered environment. In some cases the teacher retains control (see for example practices describe at http://www.nki.no/~morten/). When this is the case, there are a number of appropriate strategies Teams should be heterogeneous in terms of ability. Women and minorities should not be outnumbered by white males as this will suppress their interaction. There are a variety of exercises in collaboration such as jigsaw (each team member has part of the information and teaches it to the others), think-pair-share (pairs of learners first read information and then discuss it or one teaches the other), reciprocally guided peer questioning (where peers question each other in turn about information which all have read), TAPPS (think-aloud-pair-sharing-problem-solving), among others (see descriptions at http://mwus.mokwon .ac.kr/~mis/research/download/coop2.html). Teacher control in collaboration is beneficial as it reduces learner cognitive management skills/needs. The teacher performs the goal setting, strategic planning, monitoring, evaluation and revising which learners would have to do if they were in charge of the process. On the other hand teacher control reduces learner confidence, sense making, and constrains the learning experience within teacher set parameters.(For a project design example see http://www.gsh.org/wce/kerns1.htm)

Interaction with Different Materials: Interaction in a CML environment is usually thought of as relating the interaction of people (see http://scribe.iat.unc.edu/Courses/English12-70/e12-700.nsf?OpenDatabase). However, much interaction takes place between learners and various types of materials. The accomplished teacher will lead the learner to material which is appropriate in terms of level and approach, but individuals will still have preferences as to the kinds of material with which they prefer to interact. Good teachers, who are trying to support individual differences in their learners, will provide alternative kinds of materials for learners to choose among. In CML these can include text on screen, books, articles, primary source material, simulations, streaming audio presentations, streaming video presentations, etc. Learners should be able to choose among alternative materials based on their learning preferences.

Interactivity Is High Maintenance: To maintain an interactive relationship with one or more team members takes a lot of effort. It is also exciting and challenging for most learners. Learners must recognize that they will have to spent more time than is usual for a course using interactive processes, if social construction is to take place effectively.

PSYCHOLOGICAL FACTORS RELATED INTERACTION AND MOTIVATION IN COMPUTER MEDIATED LEARNING (see http://192.108.114.10/~mboudour/mab/csi.html)

Electronic Masks: Some CML cyberspaces offer electronic masks, i.e., you can pretend to be someone that you are not. You can mask physical, cultural, racial, age and other factors. " All are equal on the Internet," as it says in the MCI commercial. Shy learners like CML. They are typically low in self confidence and low in social skills. The electronic masking effect allows some, but not all, of these learners to bloom and expand their personas. Shy learners do not respond well to flaming. They will either withdraw or they, because they feel protected by the medium, respond violently. Hiding and lurking are particularly likely when the rules of the space are not user friendly or for new learners when they are unsure of the appropriate rules.

Learner Motivation in CML: Generally, learners are more motivated to use CML than they are to come to a traditional class. Primarily this is because so many of them have had poor affective experiences in traditional classrooms. It is good to remember (Raffini, 1996) that some researchers believe that conventional instruction, by its nature, creates educational disability and undermines intelligence. Much traditional instruction controls student behavior by negative affect; shame, guilt, negative reinforcement, etc., for lack of conformity to teacher desire. Computers seldom laugh at you, humiliate you, or make you look stupid in front of your peers. They can severely frustrate you, but this almost always happens individually rather than in front of a group. Therefore, learners are likely to be more motivated when they come to you for CML. Typically learner motivation is likely to be intrinsic rather than extrinsic. Usually learners have a choice as to whether or not they will take a course which is computer mediated, although this may change rapidly in the future. Because of the constructive and collaborative nature of CML, learners are more likely to have control of the learning goals and therefore can shape them to come closer to their individual learning goals. Learner control increases the relevance of the learning and in turn improves learner motivation. There is a reduction in external control, and there is usually no direct supervision in asynchronous environments. Hence the learner must take more responsibility, and with responsibility comes motivation. Some learners need assistance in terms of learning how to pace themselves when they take responsibility for their own learning. Some learners will go too slow (these are the ones most teachers worry about), but there are some that will go too fast or too deep (these are the ones we should really worry about). Some will disappear into the computer and only come up for air occasionally. There is such a thing as being too involved, and though this shows a high level of motivation, it may not be psychologically good for the learner, and it may affect their performance in other non-CML courses.

INTERACTIVE TEACHING PRACTICES

Teaching to Promote Interaction: There are many principles of instruction that will support constructivist teaching or facilitation (see http://www.mindspring.com/~profjer/article/role.htm). Learners' knowledge is extended or deepened by repeatedly coming into contact with information or experience which builds upon what is already known. Learners take something new away from each of these information/experience contacts, transforms it, and adds it to what is already known, thereby increasing personal knowledge (see http://www.geom.umn.edu/apps/). This idea has lead to a curricular organization called the spiral curriculum where the learner is re-presented information or is brought into contact with information a number of times in the course of a period of learning. Multiple contacts with ever more complex materials are designed into the curricular offering (see http://ciue.rpi.edu/studio.htm).

Artifacts Shape Mental Processes: Anything physical of tangible, which is not alive can be called an artifact. The objects in our environment and our knowledge of them determine the way in which we perceive our environment (see for example http://www.duq.edu/PT/RA/RA.html). If a learner has only a few learning tools these are the tools which will be used. If all we have is a hammer the world will be perceived as being full of nails. Our understanding of the artifacts also shapes the way we can use and interact with them (see a description of artifacts in science at http://www.utexas.edu/depts/tnhc /.www/crayfish/astacidea/astacidea.html).

Stimulate with Complex Material: There is a line of argument which favors the presentation of complex material to provoke learner interest, challenge, and interaction. Cognitive flexibility theory (Johansson and Spiro, 1992) asserts that teachers should teach using cases and rich examples. Teaching using cases makes the learning more authentic and practical. Edelson, et al. (1995) present methods for scaffolding using multiple case studies in a CML environment. The learners see the case as representing a real world situation and they find the setting for problem solving to be authentic. When new CML information is introduced, links can be made from the case examples to abstract concepts so that the information can be concretized and presented in a way that the learners can use to tie the new and abstract learnings to their previous knowledge. (See http://curry.edschool.Virginia.EDU/go/capetown/intro.html).

Importance of Scaffolding in CML: In CML scaffolding is more important than it is in traditional education because learning is typically collaborative. In this many-to-many learning, all participants will provide scaffolding to other participants at different times during the learning process. Because of this process, participants must be exposed to the idea of scaffolding and know when it is appropriate in the dialogic process. Those who need scaffolding may or may not know that it is needed. If they know it is needed, that is they cannot do what ever it is that they are supposed to do with out assistance then they should ask for scaffolding. Collaborative groups need to become familiar with when scaffolding is needed, how to ask for it, and how to give it in acceptable forms. In a psychologically safe environment, the teacher may be the first resource used for scaffolding until learners seek help from others. After collaborative groups have been working together for a while, there will be little need for external scaffolding from the teacher unless they cannot scaffold each other and their own internal resources have been exhausted. If teachers do too much scaffolding, much of the value of the collaborative experience designed to help them work together solving authentic problems will be lost.

PEER STRATEGIES

Peers Extend Ability: The presence of colleagues who we can observe or interact with extends one's own abilities, according to Vygotsky (1978). We monitor our progress by observing what others do or are capable of doing. This validates what we do, provides a perspective on progress, and provides scaffolding, if we are not as far along as some of our peers. Having colleagues also helps us to articulate prior knowledge through the sharing process as we discuss what we know. In collaboration, we talk about what we know and elaborate on what we learn. This Vygotskian process, internalization, requires active participation on both sides. The learner who does not have the knowledge must be in the zone of proximal development. The advanced learner must justify the actions so that the learner can understand how to learn and why to learn. The learning is transformative and changes the knowledge structure of the learner. That is, there is a restructuring of the learner's knowledge. In fact, because of changes that happen as part of the explanatory process, ther, may be changes in knowledge structures on both sides.

CML Activities That Invite Belonging: Being part of a community invites belonging. This means that the learner must identify with the community and support its goals. Being part of a CML team invites belonging as does collaborative/cooperative learning which is focused on learner centered projects. When CML teams are developed, activities that invite belonging include email welcomes, asking of questions, invitations and sharing experiences. This can be done is a variety of settings including chat rooms, a course cafe, or a mutually used virtual space. As projects develop, putting everyone's name on the project invites belonging and responsibility. Motivators like "we can do it" or "you did a good job" are invitations to belonging. Belonging and interactivity can be promoted by asking for help from someone who is shy, asking for explanations from those who are reluctant to participate or who seems slow to catch on (for an example from project learning see http://www.covis.nwu.edu/Papers /edmedia94.html).

COGNITIVE APPRENTICESHIPS (see http://www.ilt.columbia.edu/ilt/papers/JohnBrown.html)

Apprenticeships: Apprentices are those who watch, follow , shadowed the beginning work in the learning of a skilled process which is usually Jourdan (1987) describes the traditional apprenticeship as being focused on doing rather than on talking or knowing. Work is the driving force. It has immediate value in that work is accomplished and through work of ever increasing complexity, there is progressive task mastery. The learner starts by performing easily learned skills, where mistakes are not too costly and learns to create a skilled performance. Performance standards are embedded in the work. The apprentice owns the problem for the piece of work with which he/she is involved. Expert task execution is obvious and expected as an outcome as the product will be used. Teachers and teaching may be invisible as the learners observe and do.

Sequence: Collins, Brown, and Newman (1989) describe the sequence in which information is transformed into knowledge and in which skills are learned in the apprenticeship moving from simple to complex. The learner starts by doing some basic practice which can be learned and practiced without too much supervision. The learner practices this skill until competent and is directed to move on to a slightly more complex skill. The learner is embedded in a cognitive community where he/she can observe others who are farther into the process performing at higher levels. This observation sets the stage for the learner's own future performance. As the complexity of the material increases, the diversity of the problem-solving also increases. The learner has to know not only how to perform the skill,but when the skill should be applied. This complexity sequence continues until the learner is ready to function without supervision and the learner is initiated into the expert community of practice.

Method: A variety of methods are used in the acquisition of skill and knowledge in the cognitive apprenticeship, according to Collins, Brown, and Newman (1989). The teacher can act as a coach offering hints, provide feedback, give reminders of when and how to do something, provide scaffolding when needed, and fade the scaffolding when the learner can perform independently. The learner can observe and try to replicate a demonstration by the mentor, engage in discovery processes, and invent procedures which become exportable strategies (a discussion is provided at http://www.ilt.columbia.edu/k12/livetext/docs/berry1.html).

Content: All learning is situated and is progressively developed through content related activity. The apprentice, according to Collins, Brown and Newman (1989), ignores the distinction between the vocational and the academic and learns what is necessary to do the job. Content may include learning how to know, cognitive management strategies, problem solving strategies or tricks of the trade and, of course, the information needed to perform the tasks. All of this can be provided in CML.

INTERGENERATIONAL COMMUNITIES

Defining Intergenerational Communities of Learners: The basic idea for intergenerational communities come from James (1997) (see http://www.soc.hawaii.edu/~leonj/leonj/leonpsy/gc/generations.html) who presents the concept that learners from one class can create materials with which learners from later classes can learn (see http://www.soc.hawaii.edu/~leonj/leonj/leonpsy/cognitive.html). In other words, a class can create a database that others can mine. They can also create teaching materials that others can use so that learning will be easier. Learner created examples usually will be more on the level of new learners than teacher examples. If information for a class is collected and maintained in an electronic archive, each successive class or generation can use that material and build upon it. Hence, after several generations, learners should be able to go farther into the material and learn more than they would be able to if they had to start from scratch.

Making Disciplinary Knowledge, Practice, and Culture Visible in Generational Curricula: With the acquisition of the language or vocabulary needed to talk about information in a discipline, ideas are linked together creating a web of relationships which fosters understanding (see for example http://www.soc.hawaii.edu/~leonj /leonj/leonpsy/instructor/kcc/kcc97.html). For each new learner, alternatives are compared and new information is generated by integrating the existing information with new information. Learners critique ideas with guidance and support from others and eventually develop their own ideas independently. Learners reflect on their progress and on the new structures which they have created.

Benefits of Intergenerational Learning: The intergenerational learning process maintains a focus on learning to acquire knowledge as opposed to information. Learners learn a variety of skills as the multigenerational database is constructed. They learn scientific and scholarly skills such as writing for the public, analyzing the work of others, expressing an intellectual position, and developing model school activities. Learners develop information literacy in a discipline and become familiar with technology as a medium of instruction. They also develop leadership and citizenship skills as they volunteer for projects (all activity should be voluntary and interest based). Each learner can expand the knowledge base and introduce innovations in teaching and learning, and maintain an intellectual presence in the community. There are a variety of positives which develop out of intergenerational practices. James (1997) lists several. Learners learn to reflect on practices of previous generations. They learn to develop individual meaning, and, by using materials previously created, they see evidence which helps in meaning development. They see variations in interpretation and meaning which deepens their thinking skills and provides scaffolding when they are learning. They act on the world and construct materials which again aid in the development of personal knowledge and in the provision of information for others in later generations.

Developing Intergenerational Communities: Students use materials developed by earlier generations to foster their own learning. This process leads to the development of multigenerational communities. There are a variety of forces that are at play here that develop when learners learn in this way (see http://www.ls.sesp.nwu.edu/lc/sitetoc.html).

Interactivity: Interactivity strategies revolve around the process of interaction necessary to create collaborative documents within and across generations. Individuals create journals of what they do and experience, add this information to the database, and share it with others. Interview data with subjects or authors would be useful in certain disciplines. Notes which are shared with collaborators or are archived, provide source documents for future developers. Cognitive maps, which show structural relationships, are used to show structure and interrelationships between ideas and pieces of information. These maps may be used to scaffold, provide the basis for new relationships, or as source documents for further development. The use of interactivity in an asynchronous sense requires objective self-focus, particularly if the interactivity is cross generational.

Generational Strategies: Generationally, we have learners who will form teams within their generation to develop service modules which later generations will use. The team focuses on writing for each other (within generation) and for others across generations rather than for the instructor. This provides an authentic audience. Learners organize past work in new formats, feature past work in their work, and use past work as the basis for further expansions of ideas. They will develop coaching strategies for their peers and, after they are validated, leave these electronic coaches for others in following generations to use as scaffolding when needed. Other things that they might do include indexing and annotating prior reports, creating and developing new associations between prior knowledge, and creating cognitive maps which integrate old and new materials.

Assignments in Generational Curricula: James (1997) (see http://wwwosoc.hawaii.edu/~leonj/leonj/leonpsy/gc/intro.html) describes a process for making assignments in generational curricula. Learners write weekly assignments. From the assignments reports about the material they are learning are created. The learner reports are published on learner generational web sites which are linked to the general data base. Assignments are generationally cumulative and draw upon the work of earlier generations. Learners are told to write only what they believe in and understand; therefore, there are few problems with data which are incorrect. Learners develop collaborative projects, but each learners creates an individual report posted to the database. The reports developed are for the next generation of learners not for the instructor (authentic audience). Learners show pride in their work and try to attract others to use it. Both individual and team reports in the archive can be added to at any time to maintain currency and to improve their content. Learners make suggestions for future learners as to further explorations or ways in which the accumulating data can be examined (see for example http://www.uvm.edu/~jphclass/bot160/). Successive generations of learners maintain the archive. They read the material, use it, and link pieces of it to their reports to form a super document.

Super Documents (Living Document Systems): Super documents are compilations of smaller documents put together to store information and use it within the document in a variety of ways (see for example http://www.psyc.nott.ac.uk/aigr/papers/Living-Documents/paper.html). Components of the document are adaptive in the sense that they are used, integrated, cited and linked to other internal documents to serve new needs and to show the present status of information. The contextual set of information is expected to grow over time. If growth were the only factor, then the document would be nothing more than a file cabinet. However, besides growth the document evolves, changing to meet new environmental needs and to provide information to new participants. Information changes and the uses of the information too may change, also. Many types of information can be integrated into the document. Hyperlinking allows multiple orderings based on use and the needs of the users. Material is easily added and altered for different purposes without changing the initial structure of the source documents. This allows multiple perspectives on the original documents and multiple representations of the integrated information which should represent a variety of perspectives. Information use can be extended as source documents form the basis for further information development and adaptation. Because of the linking feature various tracks can be easily followed by non-experts as they travel the information field. Just as in data bases, help and search systems can be used to facilitate access to information in the super document.

Collective Memory in Generational Communities: If formalized, collective memory is defined in groups by standard rules and procedures. Collective memory, in the intergenerational archive provides a way in which the collective memory can be built upon and integrated so that it is usable to future generations of learners. (For description see http://www.vision-nest.com/btbc/kgarden/clearning/wholeclearning.shtml)

SUMMARY

Learning theorists believe learning takes place or is enhanced by interaction with the environment, either socially or individually. CML provides learners with interactive experiences on an individual or collaborative team basis. On line computers allow learners a plethora of information on the Internet. By accessing information that is of interest or familiar to them, working in collaboration with others, in intergenerational communities, scaffolding, and using existing databases adding to them, learners in a CML environment have many more opportunities than in traditional settings for acquiring and applying useful knowledge in a psychologically secure environment.

Belle P. Aakhus
John H. Hoover
The University of North Dakota
Bureau of Educational Services and Applied Research
Grand Forks, North Dakota

RURAL OJIBWE MOTHERS' EXPERIENCES WITH EARLY CHILDHOOD SPECIAL EDUCATION SERVICES

Working with young children on an Indian Reservation brought to my attention factors which interfered with service provision. Great effort was expended by students and staff traveling to and from the school each day. Winter weather frequently made travel arduous and sometimes impossible. It required several years of daily association to build rapport with mothers. My errors of cultural misunderstanding were met either with good humor or a resigned defensiveness. Problems with service delivery seemed to me twofold: First, reservation areas tended to be remote. Thus, problems associated with ruralness were present. Second, cultural clashes and misunderstandings frequently entered the picture.

While working in this environment, I became sensitive to the opinions of Ojibwayan people, though I also worried that seeking answers to my questions about needs and culture could be seen as intrusive, or paternalistic. Nonetheless, over four years, I developed rapport with families from several different Native American communities. Concerns and successes were shared with sincerity and growing trust.

In the spirit of learning through hearing, I sought to converse with Ojibwayan mothers of students receiving early childhood at-risk services. Bureaucratic requirements for such things as eligibility determination seemed a natural focus for cultural conflicts. In addition, most providers [in my locale] were European Americans. In short, I was interested in how a system such as early childhood special education interacted with the culture of reservation mothers, particularly given their importance as purveyors of traditional ways of life (Coggins, 1996). Coggins noted for example that traditional Ojibwayan maternal values correlated positively with offsprings' social and academic competence. For many American Indian groups, "Strong female leadership in both family and community has long been a part of the culture" (Coggins, 1996, p.14).

Economic disadvantage is endemic on reservations in the upper Midwest (Schneider, 1994). For example, estimates of unemployment rates (not even mentioning underemployment) on reservations in the United States range from 30 to 90%, with an average unemployment rate of approximately 45% nationwide (Levitan & Miller, 1993). Mythology of the larger culture often supposes that more resources are available to Native Americans than is the case:

> Closely associated with the myth that Indian people get regular checks from the Federal government is the erroneous idea that Indian people get special assistance and programs that are not available to non-Indians (Schneider, 1994, p. 185).

It is probable that disadvantaged economic circumstances may also affect mothers' interactions with early childhood services. For example, economics may make it difficult to access center-based programs at a distance from the home. Some families, in my experience, have no telephones.

Based on the 1990 census, American Indians experience disability at one-and-a-half times the rate of the general population. Nearly 17% of the enrollment of Bureau of Indian Affairs schools require special education services (Morgan & O'Connell, 1986). The number of Native American children with disabilities served by Indian Headstart programs increased from 8.7% in 1979-80 to 11.52% in 1984-85. Of the 8,500 to 12,800 preschool children ages 3 and 4 with disabilities, 3000 were on 63 reservations served by Bureau of Indian Affairs (BIA) schools. Of those three thousand, 838 were receiving special education services in 1988-89. It was estimated that between 2,110 and 2,948 children on reservations served by BIA schools might need, but were not receiving, special education services. Nearly one fourth of 791 children with Individual Education Plans (IEPs) were not receiving all services prescribed in their IEPs. Those receiving inadequate services were likely underestimated since IEPs often specify available services rather than those a child actually needs (Johnson, 1991).

Some categories, such as mental retardation and hearing impairment, were reported to be lower than the national rate within the BIA. However, as the percentage of Native American students increased by 8%, special education enrollment increased 41.8%. Over the same period, 80% of American Indian children in special education were in learning disability or speech impaired categories (Johnson, 1991).

Because of the above factors, I interviewed Native American mothers about their life circumstances and culture. I was most interested in the interaction between ruralness, culture, poverty, and the provision of early childhood special education services. However, I mostly wanted participants to relate their own story--to reveal their experiences with the advent of children with special needs.

Method

Participants

In this initial phase of an ongoing project, two mothers consented to be interviewed. Each is described below.

Eloise was 36 years old. She lived in a large, comfortable farm house, with her husband Josh. Their home was in a rural area, situated in a beautiful pine and birch forest, though within 10 miles of a sizable town. Both were enrolled members of Ojibwayan groups, but from two different upper Midwestern reservations. Eloise and Josh were both extremely active in Native American culture; they and their children related lively participation in tribal and inter-tribal ceremonies and gatherings.

I found Eloise to be articulate and passionate about her son's special needs. For the most part, she spoke quickly and animatedly, though her speech slowed and became softer, seemingly more contemplative in tone, as she spoke of spiritual aspects of Dave's condition.

Dave was 6 years old at the time of the interview. He had received early childhood special education and infant services from birth. Oxygen deprivation suffered at birth left Dave with seizures, developmental delays, and low muscle tone. The latter condition produced problems with eating and swallowing, putting him at risk for choking. It was not clear whether or not Dave will evidence learning disabilities in the future. Although his cognitive and behavioral milestones were below average, his prognosis was positive, a situation quite different from what Eloise and Josh were told shortly after Dave's birth.

The second participant was 44 years old, considerably older than Eloise. Sara lived in a sizable Midwestern town (population approximately 12,000). We met at the local high school so I have yet to observe her on her home turf.

Sara spoke more deliberately and directly than did Eloise. Perhaps at least in part because she reported being in a hurry, Sara made her points succinctly and provided few overt cues regarding her emotional status. Nonetheless, she appeared trelaxed and engaged as we conversed.

Albert was Sara's foster child, for whom she has been responsible off and on nearly from his birth. He was five years old at the time of the interview, and evidenced severe visual impairment and behavioral problems. In addition, some mild-to-moderate cognitive deficits were evident. Albert may have been born addicted to crack cocaine (Sara voiced this); he was an irritable, difficult infant, according to Sara. She heard about early intervention services through another Native American mother.

Procedure

Approval for the study was obtained from the director of a rural special education cooperative in a northern state which served several school districts. Some of those school districts serve Native American children whose families live on or near three different reservations. Letters inviting participation were sent through the Early Childhood Special Education program to Native American mothers. Mothers who responded to the letters were contacted to arrange interviews.

Mothers read and signed consent forms agreeing to be interviewed and tape recorded. Participating mothers were allowed to see and edit a transcript of their interviews. In both cases, participants accepted the transcripts as presented. The language of the informed consent form stressed confidentiality, which was also emphasized during initial contacts with prospective participants.

Interviews were held in the participant's home (Eloise) or a neutral place where they reportedly felt comfortable (Sara). A brief list of general questions was used as a guide only to help ensure uniformity of material covered with each participant. Every effort was made not to lead participants to any preconceived ideas; conversations were allowed to flow as normally as possible.

Analysis

Tape recordings of the conversations were transcribed by hand. Three codes appeared to capture thematic similarities across interviews. These themes served as a heuristic for organizing results, and were treated as themes in the analysis.

Results

Analysis of the coded interviews revealed several common themes. Those experiences viewed as "successes" by mothers are described in an initial section. "Obstacles," the second subheading, were also encountered by mothers. The role of culture was experienced differently by each participant. One (Eloise) was more willing to describe her views regarding cultural issues. Culture is the third theme. Though I expected ruralness to be an issue, mothers' comments revealed other concerns and problems related to this theme than had been expected, though the theme of distance from a large metropolitan area (approximately 270 miles) was intertwined with the larger obstacles theme.

Successes

Each mother voiced clear successes resulting from ECSE services, though the specifics differed. In each case, the early childhood special education professional was viewed as genuine, knowledgeable, and capable of sharing that knowledge without pretense or criticism of the families. "She was great," related Sara. In a similar vein, Eloise offered the following statement:

> She was very non-judgmental. It was frightening for me to have someone come into my home at a time when I was spending all of my time basically feeding Dave and doing therapy with Dave. Our house was kind of crazy during that time. She made me feel so comfortable, and this is really saying something because it's a touchy thing for me. I

> felt comfortable enough for her to come into my home at any time no matter what it looked like, no matter what I looked like. She didn't judge us. She just supported us and almost nurtured me, in a way, at a time when I was so frightened. I was so afraid he'd die at any time. To have somebody work with us who was so gentle, so reassuring and non-judgmental, was great. I really feel that we were just blessed to have had her. For a non-Native American person to come into our home and for us to feel so comfortable with her is, I think, really high praise."

These mothers' comments serve as eloquent testimony to the success of the professionals who provided services for them. It apprears that personal style is important to the success of ECSE programs.

Dave and Albert's conditions both improved as a result of timely and consistent early intervention services. Albert came to Sara as a foster child at age 2 months. "He was diagnosed as being blind at birth. Through the grapevine we heard that he was a crack baby. When he came he was real irritable and I was real worried about him. (The early intervention therapist) gave me some ideas on how to cuddle him and she was real helpful. About the time he was 3 years old,", here Sara pauses, "He started tracking! That just really gave me the feeling that I was going to do something good for this baby. Through the early intervention program [I could] just see the progress that he was making."

Dave's mother expressed similar feelings about improvements resulting from the intervention program. "We did see some improvement. His seizures and apnea stopped at about one year old. He started to learn to walk and talk. I would say that I credit early intervention with really being the magic key for Dave. We had this window of opportunity at a really young age. He would be a totally different child today if it wasn't specifically for (the early intervention occupational therapist) and what she did with us, and did it right away so young. That window of opportunity would have been lost by the time he entered school."

Obstacles

Mothers expressed a wide variety of obstacles to the effectiveness of early intervention services. Under this code I noted (1) problems with distances from appropriate medical services, (2) perceived failure of physicians to listen actively and sensitively, (3) and trust issues engendered by cultural differences.

Distance. Both Sara and Eloise mentioned that appropriate medical care, especially needed specialists, was not available locally, engendering substantial investments of time and energy in travel. Sara noted that, "The doctor said he'd never be able to [write his name] and now he is reading, he is writing his name and watching TV."

According to Eloise, the medical professionals were also pessimistic concerning Dave. "They said he wouldn't walk and wouldn't talk, and (until 2 1/2) that is exactly what we were seeing." Medical opinions expressed to these mothers offered little hope and, perhaps most significantly, few targets or goals toward which care could be directed.

Active Listening. Valuable information was missed, according to Eloise, when doctors failed to truly listen to her needs. She related the following story in an excited, emphatic tone:

> ... I'd take him into the doctors and say we really have a problem here. I think something is wrong. It doesn't feel right to me. I've had 4 other children of my own. I've cared for many other foster children. Something is not right here. And the doctors wouldn't listen to me.

With support from the early interventionist, Eloise continued to seek a doctor who would listen until she found one. She had to travel to a large city to find medical professionals who would listen. "We found out afterwards that at times when I believed he had pneumonia ... and the doctors wouldn't listen to me ... he was aspirating into his lungs and getting pneumonia. With (early intervention) support, I started insisting on chest X-rays when I felt he was having pneumonia and found out I'd been right. He could've died."

Trust and Culture. A major obstacle described by both mothers was trust. Eloise said, "There's a lot of trust issues. I think that [when we had early intervention services] we were the only Native American family that had allowed early intervention people to come into the home to work with our child." Sara described her first early intervention team meeting. "I was kind of intimidated when they first came out. I didn't know what to expect. A few of them were really dressed to the max. They were so formal with me and the big words and all. It took awhile for it to sink in."

Eloise addressed the history between Native- and Euro-Americans.. "There are many people in their family history who know that if there were children born on the reservation, people would come in and say the parents were poor and they were Indian and they would take the children away. They never saw (their children) again. I know many families that have had histories like that. Also, if you had a child with a disability they came and took the child. The parents didn't have to be neglectful, abusive, or alcoholic for this to happen."

On the reservation, parents can select between schools emphasizing traditional Native American culture and public programs. For both mothers, this proved a difficult decision. Eloise and Sara expressed that the tribal schools offered better cultural grounding, but they also stated that the public schools offered better educational services. Selecting one alternative over the other was frustrating.

Eloise argued that Native American traditional values contributed positively to Dave's care. "It's a cultural thing for us to have our babies sleep where we are. We had a swing for Dave right above our bed, but at first I wouldn't even let him be in that. If he had been in another room in a crib when we brought him home and he stopped breathing, I would have never known. He would have been a SIDS [victim]."

Spiritual feelings and experiences are difficult for many people to talk about, regardless of background. Dave's birth altered Eloise's feelings about the Creator. "I had always had a trust that the Creator was always with us and would help us no matter what happened. When Dave was born I thought we were going to die. I don't know what happened to me, but I just didn't have trust any more in anything." Some time later she went to a "spiritual gathering for women" where she cried as she remembered the frightening experience of Dave's birth and early problems. A friend at this gathering helped her to see that, "It wasn't the Creator that let it happen or made it happen. She said the Creator stepped in ... and saved him [Dave] because he is meant for something really important."

Another cultural tradition that provided strength for Eloise came from the family's medicine man. "When we can't find something out with western medicine, we go to our medicine man. I feel lucky that we have him to go to. When you are working with a Native American family, you should have respect for those beliefs. It's not a voodoo doctor, a witch doctor, or superstitious mumbo-jumbo. To us it's very real." The medicine man visited Dave in the hospital, where he gave doctors his judgment on the status of internal organs and the effect of their functioning on his survival. Without lab reports having been done, the medicine man's diagnosis matched that of medical doctors, to outsiders' amazement.

Summary and Conclusion

The successes enumerated by the mothers were related to specific roles of the ECSE practitioner (the same individual in both cases). First, she was skilled at her craft, comfortable with her therapeutic role. Second, she advocated for mothers and caregivers when tribal members found it necessary to interact with bureaucracies and medical professionals. Finally, caregivers who listen carefully and evidence respect for traditional cultural values enjoyed the trust of Native American mothers.

Perhaps the most important aspect of the training of early childhood specialists representing all the disciplines are development of advocacy and active listening skills. In addition, it is important that such individuals be taught the culture and lore of all the local subcultures, including Native Americans.

It may be important for ECSE practitioners to take the lead in integrating or coordinating tribal and public programs. As I look back on the interview, this choice was one of the most difficult faced by both mothers, but especially for Eloise who, at times, felt she was pulled between loyalty to the tribal school and what she felt was best for Dave. This type of gut-wrenching decision should not be added to the burden of mothers or caregivers of at-risk infants.

References

Coggins, K. (1996). The traditional tribal values of Ojibwa parents and the school performance of their children: An exploratory study. Ann Arbor, MI: The University of Michigan. (ERIC Document Reproduction Services No. ED 40 016)

Johnson, M. J. (1991). American Indians and Alaska Natives with disabilities. Indian Nations At Risk Task Force Commissioned Papers. (ERIC Document Reproduction Services No. ED 343 770)

Levitan, S., & Miller, E. I. (1993). The equivocal prospects for Indian reservations. Washington, DC: The George Washington University Center for Social Policy Studies.

Morgan, J., & O'Connell, J. C. (1986). The rehabilitation of disabled Native Americans. International Journal of Rehabilitation Research, 10,139-149.

Schneider, M. J. (1994). North Dakota Indians: An introduction. Dubuque, IA: Kendall Hunt.

Statistical Abstract of the U.S. (1996). Washington, DC: Bureau of the Census.

Barbara Luetke-Stahlman
University of Kansas-School of Allied Health
Kansas City, Kansas

LONG DISTANCE EDUCATION AT THE UNIVERSITY OF KANSAS

Because much of the Midwest is comprised of rural or remote communities, the KU Deaf Education Program (DE) has offered a rural training option for certification in deaf education for several years. The terms "rural" and "remote: are used by Deaf Education staff to refer to locations that are more than one hour away from a university offering such certification. For example, rural training in the Midwest that is associated with KU can occur at any site in Kansas that is not located near the Kansas City area, at any site in Nebraska that isn't located near Omaha, and at any site in Colorado that isn't located near Greeley.

Delivery of KU Deaf Education course work occurs in several ways. In 1993, when staff in DE at KU first began offering rural training, three long distance learning options were made available. First, acceptance of a larger number of credits than is typically accepted by the University was made possible. That is, rural students were encouraged to take as many courses in local colleges and universities as they could identify that met the requirements for certification as a teacher of the deaf in the state of Kansas. Secondly, correspondence courses were developed and used by students that included lectures on videotapes, reading assignments, projects, and exams. Assessment, consultation, parenting, behavior management, and sign courses are available in this format. The third option involved several classes that were specific to the field of deaf education and were not offered at other colleges and universities. KU deaf education professors thought these "certification specific" courses required more student contact with experts in DE than was possible through correspondence courses. Therefore, interactive/compressed video was used to offer Deaf Studies, Deaf Methods, and Language and Deafness. Communication with students enrolled in the rural deaf education certification project occurred primarily by telephone and letter, as most students did not have access to e-mail at this time.

Rural training in deaf education at the University of Kansas was initially supported by a federally funded personnel preparation grant awarded by the federal government. When that grant terminated, the University supported some aspects of the project until a new grant project was awarded. Some aspects of the training are still funded by a federal project while others are supported by the School of Allied Health at KU.

Explanation of Technologies

Technologies used by the KU Deaf Education Program include interactive/compressed video and course development on the World Wide Web. Interactive/compressed video (I/C) usage was already in place at KU when the DE staff became interested in long distance education. Mahler (l992) explained that I/C video was selected because special networks (e.g., lease lines or fiber optics) were't required and commercially available common carrier telephone services were available throughout the state, national, and world. Then and now, the state KANS-A-N network is utilized. Approximately seven sites within Kansas can be reached simultaneously at a cost of about $50 per hour. This year, I/C video was used to reach students in Nebraska, Iowa, and Missouri. Costs depend on the time of day, number of sites connected, the cost of technicians hired at the rural/remote centers, and the charges levied when crossing state lines--but is more expensive than instate transmission.

I/C courses first originated at the KU Medical Center but now are offered from the Regent Center campus in a suburb of Kansas City. When teaching was done at the KU Medical Center, a professor in deaf education and students enrolled in the urban program were situated in a small conference room in the hospital. Since that time, several additional, larger classrooms have been built and transmission units are either fixed or mobile. These units include camera-recorder-transmitters mounted on rotating platforms that can be directed to individuals or small groups seated i the rooms (Allen, 1992). The systems have fully interactive audio/video links that permit face-to-face conversation and use of multimedia support (e.g., videotapes, transparencies, book pages, evaluation tools, equipment demonstration, etc.).

Luetke-Stahlman (1995) praised the use of the technology in providing rapid, high-resolution audiovisual transmissions. Little training of DE faculty was necessary when teaching over I/C video first began. Educators at KU can see, hear, and converse with their students and colleagues throughout the Midwest much as they can in courses using a traditional lecture/discussion format. Students are required to watch videotaped lectures that have been sent previously before the airing of some I/C courses. This helps to insure that more time in class will be used for discussion and demonstration. Lavaliere microphones are used so that hands are free to sign, demonstrate, or handle teaching materials.

When the KU professor interacts with students at one site, all participates at all other sites cansee the professor and the speaking student. Should another student at another site speak, the camera is activated at that site so that everyone can then see that student. The instructors ability to see student's facial expressions and reactionsassists in determining if students are understanding concepts presented or discussed. A video recording (including the contributions made from other sites) can be made at any site on the system. This may be useful if a student is absent or if equipment at one site suddenly fails technically (Luetke-Stahlman, 1995).

The advantages and disadvantages of instruction using I/C video have been empirically studied (Luetke-Stahlman, 1995). Thirteen students across two courses and representing five sites rated the experience of using the technology highly satisfactory when compared to correspondence course formats. For example, a student commented, "The I/C video course made me feel more a part of the class. It worked well for me." Another noted that "taking the course in this I/C manner was better than the correspondence course format. Being able to directly speak to the instructor and other students was crucial part of the class for me" (Luetke-Stahlman, 1995; p. 42).

The disadvantage of using the I/C video is that it is expensive and not all students can find a convenient I/C site in their area. KU DE staff have had little success with finding administrators at educational cooperatives or special education directors who are willing to help share the local costs of the rental lines, technicians, and room charges. It is for this reason that KU DE staff is exploring World Wide Web (WWW) technology.

At this time one course, Language and Deafness, is available in part on the WWW. Reading material, graphics, photographs, audio and videotaped examples, study guide questions, quizzes, and resources for further reading are available in this format. Development of interactive activities is now underway so that the course can be offered without traditional contact with a professor. Plans are to develop several other courses (e.g., Deaf Methods, Deaf Studies) on the WWW as well.

Advanced Learning Technology Alliance (ALTA) is a technology in education consortia at KU focused on improving student performance through the integration of advanced technologies into instructional activities and is available as a resource to DE staff.

ALTA serves students and teachers in the five states of Kansas, Missouri, Nebraska, Oklahoma, and Texas. The ALTA group has agreed to design, develop, and implement a CD-ROM course for the deaf-blind option of KU DE. In addition, the ALTA group will provide initial access to developmental software, audio/video access and space on the World Wide Web server at no cost to the project. While some financial resources to develop DE courses are available at KU, applications for competitions organized by telephone companies, as well as federal grant applications are being written.

Contact with students who are interested in the KU Deaf Education Program occurs using traditional sources of correspondence such as long distance telephone calls and mailings. However, use of e-mail and facsimiles are increasing annually, and are especially beneficial when students are deaf or hard of hearing.

Description of the Program

The KU DE program is supported with state funds via the School of Allied Health at the KU Medical Center. Federal funds strengthen the Program's ability to expand options, insure project students are specially trained, and improve recruitment and retention for trainees in general. Many students can not afford to attend graduate school without financial support.

Certification in Deaf Education in Kansas can only be obtained at the graduate level. Six options of programming are offered and all but the Early Childhood option require general education certification. Other prerequisites include course work in introduction to special education, deaf education, sign skill, and monolingual language development. Experience has taught the DE staff that students completing these courses enter the program well prepared for the rigorous training in DE. All pre-requisite courses can be acquired through long distance learning formats: three are offered through the KU Department of Continuing Studies. Sign classes (e.g., ASL, PSE, SEE II) are often available at regional community colleges in the state, but the KU DE offers videotaped lessons as well.
Students can elect to become certified at KU in early childhood deaf education (ECDE); ECDE and special education, elementary deaf education, secondary deaf education, deaf-blind education, and rural training. The rural option is open to those from rural/remote areas. For all other plans of study, students relocate to the greater Kansas City area (and become "urban" students"). The plans of study in DE differ in important ways, yet all include the competencies recommended by the Council on Education of the Deaf (CED; summer, 1994) and the State Licensure Committee (Kansas State Department of Education, summer, 1995). All plans of study fulfill state competencies for DE. Courses about consultation, program and curricular adaptations in inclusive settings, and multicultural needs are standard components of the KU program.

The students who enroll in the KU Deaf Education Program are in a diverse group. Most students in the KU DE program are 20-30 years old, married, and most are hearing. Every class also has included students who are deaf or hard of hearing themselves and others who are non-Caucasian.

Deaf-Blind Component. Beginning January, 1998, graduate teachers-in-training from DE, SE/ SMD, and EC will be encouraged to take course work specifically designed for D-B education. Six courses will be included in this plan of study. Two courses, SPED 735-Deaf Studies and AUD 703-Manual Communication, already offered in the DE program, will be revised to include sections on such topics as tactile and touch cues, current research in D-B education, assistive technology, etc. SPED 718-Augmentative Communication, will be revised to include a more in-depth look at nonsymbolic and symbolic methods of communication, instructional strategies (i.e., embedding communication skills in inclusive settings), facilitating the development of social networks, etc. SPED 735-Characteristics of

Exceptional Children and Youth, required of all SMD majors, will serve as a prerequisite for students who elect to take an additional characteristics class devoted to D-B education. Preservice/inservice level students and teachers throughout the Midwest region may take one (1-week) graduate seminar in Deaf-Blind Education, to be offered each summer. Co-directors and key personnel will work cooperatively, incorporating existing materials used in the academic year with new content provided by D-B consumers, parents and teachers of children who are D-B, and professionals in related fields.

In addition, an advanced characteristics class in D-B Education will be offered in years 2 and 3 over the WWW. Core classes (e.g., Deaf Studies, Augmentative Communication, Orientation and Mobility, etc.) as well as course content from the summer seminar will be adapted for this medium. Course work via the WWW or through the summer seminar will provide specialized study for graduate students, certified special and general education teachers, and individuals in related fields throughout the Great Plains states, allowing them to update certification, expand their knowledge base, and more adequately provide for their students who are deaf-blind.

Capacity of Applicant to Recruit Qualified Students

A comprehensive campaign to publicize information regarding components and requirements of the training project, professional opportunities in the fields of education of S-D/HH and/or D-B, and financial support has already been developed by faculty of the DE program.

Recruitment for a small cadre of new students is accomplished through a variety of methods each year. Press releases, posters, brochures, and all the traditional ways of attracting students to DE programs are utilized. As faculty in Deaf Education are hired and housed in the School of Allied Health but degrees are confirmed through the Department of Special Education in the School of Education, web sites from both campuses are utilized. Many students become interested in the KU program after hearing students and professors present at workshops and conferences, or after reading articles by students and professors in nationally circulated journals. Strategies for recruitment will include the following methods:

Method Way In Which It Occurs Brochure Sent to prospective students
Press releases to newspapers/newsletters, radio announcements
Utilize KU University Relations Department
Flyer regarding certification requirements and access
Included in admissions packet requests
Direct recruitment and advising
Deaf Education and Special Education faculty and doctoral students
Assistance with child care, housing, and financial ai
Dianne Wright - Department of Hearing and Speech
Application to the graduate program
Sherrie Saathoff - Admissions Officer in the KU Special Education Department is employed to assist students with application concerns and process
Publicize at local, state, regional, and national organizations
Faculty is active at each level and regularly attend meetings, often as speakers. These include *Issues in Language and Deafness* conference in Omaha, Nebraska, State Council for Exceptional Children, Kansas Missouri Educators of the Deaf, and national organizations (NAD, CEC, CAID, A. G. Bell, ACED/HH, TASH).
Electronic advertisement
Special Net, other electronic bulletin boards
Stipend support made possible by federal competitions

Exceptional Children and Youth, required of all SMD majors, will serve as a prerequisite for students who elect to take an additional characteristics class devoted to D-B education. Preservice/inservice level students and teachers throughout the Midwest region may take one (1-week) graduate seminar in Deaf-Blind Education, to be offered each summer. Co-directors and key personnel will work cooperatively, incorporating existing materials used in the academic year with new content provided by D-B consumers, parents and teachers of children who are D-B, and professionals in related fields.

In addition, an advanced characteristics class in D-B Education will be offered in years 2 and 3 over the WWW. Core classes (e.g., Deaf Studies, Augmentative Communication, Orientation and Mobility, etc.) as well as course content from the summer seminar will be adapted for this medium. Course work via the WWW or through the summer seminar will provide specialized study for graduate students, certified special and general education teachers, and individuals in related fields throughout the Great Plains states, allowing them to update certification, expand their knowledge base, and more adequately provide for their students who are deaf-blind.

Capacity of Applicant to Recruit Qualified Students

A comprehensive campaign to publicize information regarding components and requirements of the training project, professional opportunities in the fields of education of S-D/HH and/or D-B, and financial support has already been developed by faculty of the DE program.

Recruitment for a small cadre of new students is accomplished through a variety of methods each year. Press releases, posters, brochures, and all the traditional ways of attracting students to DE programs are utilized. As faculty in Deaf Education are hired and housed in the School of Allied Health but degrees are confirmed through the Department of Special Education in the School of Education, web sites from both campuses are utilized. Many students become interested in the KU program after hearing students and professors present at workshops and conferences, or after reading articles by students and professors in nationally circulated journals. Strategies for recruitment will include the following methods:

Method Way In Which It Occurs Brochure Sent to prospective students
Press releases to newspapers/newsletters, radio announcements
Utilize KU University Relations Department
Flyer regarding certification requirements and access
Included in admissions packet requests
Direct recruitment and advising☐
Deaf Education and Special Education faculty and doctoral students
Assistance with child care, housing, and financial ai
Dianne Wright - Department of Hearing and Speech
Application to the graduate program
Sherrie Saathoff - Admissions Officer in the KU Special Education Department is employed to assist students with application concerns and process
Publicize at local, state, regional, and national organizations
Faculty is active at each level and regularly attend meetings, often as speakers. These include *Issues in Language and Deafness* conference in Omaha, Nebraska, State Council for Exceptional Children, Kansas Missouri Educators of the Deaf, and national organizations (NAD, CEC, CAID, A. G. Bell, ACED/HH, TASH).
Electronic advertisement
Special Net, other electronic bulletin boards
Stipend support made possible by federal competitions

Typically 5-10 students are enrolled in each of the plans of study offered by the KU DE Program. The KU Department of Special Education has been nationally ranked number one as a training facility in the area of special education and, thus attracts a very high caliber of applicants for its training programs. These have been supplied at the end of this section. Enrollment can be done in person or through the mail. Electronic systems of enrollment are only now being explored. Rural students do not have to be physically present to enroll in desired courses. Advising occurs in person and using the telephone, fax, and e-mail. Professors and instructors often meet rural students at state and regional conferences so that personal conversations can occur.

Recruitment. Strategies for recruitment will focus on attracting prospective participants who do not typically respond to traditional forms of recruitment (i.e., minority students, students who are deaf themselves, and students in rural settings). History, the best predictor, has proven that the reputation of both the Department of Hearing and Speech as well as that of Special Education
are so strong as to be effective in attracting qualified students. Faculty will facilitate the certification of professionals by utilizing the following strategies:

(1) Offering all courses after 4:00 in the afternoon;
(2) Welcoming part-time study;
(3) Accepting up to 6 credits of course work completed at other colleges and universities;
(4) Linking first and second-year students for the purpose of mentoring;
(5) Offering summer course work; and
(6) Providing correspondence via E-mail, telephone, and individual/group sessions.

Admissions. The capacity of the institution to recruit well-qualified participants is ensured by rigorous admissions procedures. Applications for admission to the graduate program are accompanied by written statements of professional goals, documentation of past educational and professional experiences, and transcript review. The Admissions Committee compares applicant documentation with criteria traditionally associated with potential to complete a masters degree at KU: (a) a GPA of 3.0 or higher; (b) letters of endorsement from former and present college or university teachers, supervisors, and colleagues, attesting to the quality of or the potential for graduate course work and communication skills; (c) evidence of ability to communicate professional content in writing; and (d) demonstrated commitment to acquiring additional knowledge and skills in an area of specialty as well as a variety of professional roles. No single criterion is used to determine admissions decisions or status and Affirmative Action guidelines are followed. Students selected for stipend support are interviewed by the committee to ensure they understand the required grant activities, will work on-site at local schools that serve D/HH, D-B children, attend state and local conferences, etc. They are asked to sign a contract, co-signed by the DE staff and the Director of Graduate Student Affairs.

Adequacy of Resources

The University of Kansas is a major comprehensive research and teaching university that serves as a center for learning, scholarship, and creative endeavor. It is the only Kansas Regents University to hold membership in the prestigious Association of American Universities, a select group of 58 public and private research universities that represent excellence in graduate and professional education and the highest achievements in research internationally. The University of Kansas offers the highest-quality graduate programs as well as outstanding libraries, teaching museums, and information technology. Educational, research, and service programs are offered on the main campus in Lawrence. In addition, health related and some special education degree programs are located in Kansas City at the KUMC. The university is committed to excellence and fosters a multicultural environment in which the dignity and rights of the individual are respected. Intellectual diversity, integrity, and disciplined inquiry in the search for knowledge are of paramount importance. The KU Medical Center and the KU main campus have ample resources that will contribute to the successful completion of DE degrees.

Quality of Practicum Training Settings. A wide range of practicum sites is available to both KU teacher training program in DE. Practicum experiences are given a major emphasis with the underlying element being specific role- and competency-based rather than being oriented toward exposure and general experience. Practicum sites are evaluated by University personnel prior to placement. Expert teachers, most of who have more than five years in the classroom, are selected as cooperating teachers. University faculty and doctoral students serve as practicum supervisors, and students are evaluated throughout the 8-15 week practicum experience by both the cooperating teacher and the practicum supervisor.

The variety and cooperation of practicum sites is a strength of the proposed project. DE program sites are located in or near the most densely populated regions of the state (Kansas City, Topeka, and Wichita) as well as in rural settings. Faculty in the KU Deaf Education and Special Education departments have an established professional relationship with administrators and teachers at the sites; often providing inservice training to teachers and other service providers in the schools. This contact has been strengthened by graduates who now teach in both urban and rural settings and are active in the state organizations for teachers of students who are D/HH and/or D-B. The cooperative arrangements with school districts offer students the opportunity to work with a wide range of children and youth with disabilities (birth-21). Most of the practicum settings are located in public schools in which a commitment has been made to move toward inclusive schooling, however many students elect to complete one student teaching experience at the Kansas School for the Deaf.

The Training Program

The Department of Special Education provides comprehensive programs each semester for approximately 400 students seeking certification in special education and approximately 70 full or part-time doctoral students. Program options include preparation for roles as teachers, consultants, supervisors, program managers, clinical practitioners, teacher educators, and researchers. The Department of Special Education conducts programs at the main campus in Lawrence, at the KUMC in Kansas City, and at the Regents Center in Overland Park. Formal courses are offered at each site as well as through outreach programs via the Internet and interactive television sites.

Recommended for Potential Users: Pitfalls, Problems, and Promises

Three critical issues in the KU DE program are recruitment, breadth of programing, and cost of courses development and use when technologies are involved. Despite a tradition of excellence, national recognition, and active faculty, the KU DE program must continue to be creative in advertising training options and recruiting students. Offering the diversity of programming required to meet the needs of students and their families in the Midwest is also very challenging. Finally, the cost of developing courses to be offered over I/C video or for use on the World Wide Web is a critical issue and one that is currently a primary focus.

Concerns and cautions that the DE staff would offer to readers are to understand the technologies being purposed, run trial sessions before committing to teaching using a particular format, and feel confident in grant writing abilities. Many educators who are interested in various technological formats are not deaf educations, and are not aware of some of the unique challenges that information and methodologies in the field present. Havine one's hands free to demonstrate and sign is an important consideration. The low number of students enrolled in deaf education courses may make some formats financially inappropriate. Those

DE faculty who are able to find federal and state funding for projects are going to be able to offer more diversity in training formats that those who must rely on the technological interest level of their college or university.

For more information about the KU DE program, please contact:

Barbara Luetke-Stahlman, Ph.D.
Director: Deaf Education
School of Allied Health
3901 Rainbow Blvd., 2008 CDU
Kansas City, KS 66160
Phone: 913-588-5750
Fax: 913-588-5752
E-Mail: ☐ HYPERLINK mailto:bluetke@kumc.edu ☐☐bluetke@kumc.edu☐

References

Allen, A. (1992). Telemedicine in Kansas. Kansas Medicine, 323-325.

Luetke-Stahlman, B. (1995). Deaf education in rural/remote areas: Using compressed/interactive television. Rural Special Education Quarterly, 14(4), 37-42.

Mahler, W. (1992). The technology and language of telemedicine. Kansas Medicine, 354-355.

Ms. Doris Jones
Dr. Susan Miller
Dr. Catherine Medina
and the NAU Research Team*
Northern Arizona University
Flagstaff, AZ 86011-5774

PARENT SUPPORT SERVICES ON THE NAVAJO RESERVATION

Introduction

Facilitating support services is an essential part of providing assistance for the families of students who are disabled. Family support is defined as whatever resources are needed to increase the family's ability to care for their child, and improve the quality of life, while maintaining the child in their natural living environment . The goal in assisting families should be to maintain the family unit, improve the care giving ability of families, giving consideration to cultural and spiritual beliefs, while helping families to find and use the appropriate support services for their child who is disabled (Association of Retarded Citizens, 1992).

According to Debby Storey, of the Family Support Project in Kayenta, Arizona, examples of family support services can include, but are not limited to:

Respite care
Special Clothing
Crisis intervention
Cash subsidies
Information/referral
Vehicle modification
Family training
Diagnosis and evaluation
Home modifications
Transportation
Counseling
Behavior intervention
Medical/dental services
recreation

Working with the parents and guardians of children with disabilities in rural areas presents unique circumstances. Providing support services to parents in the remote areas of Kayenta and Pinon, Arizona, on the Navajo Reservation, requires creativity, persistence and determination for both the Kayenta Unified School District (KUSD) and the Pinon Unified School District (PUSD). The remoteness of KUSD and PUSD is not the only factor that impacts the delivery of parent support services. The ruralness of home sites, dirt roads, difficult access, linguistic and cultural considerations create distinctive challenges in meeting the needs of families with children who are disabled (Jones, Prater, Miller et al 1997).

The total enrollment of KUSD as recorded in the 1997-98 school year is 2,867. According to home language surveys ninety-five percent of parents declare Navajo as the primary language spoken in the home. The total population of special education students in the Kayenta District is 173. It is estimated that 76 percent of students currently enrolled in special education have parents who stated Navajo is the primary language spoken in the home (Turl, 1998). The total enrollment of PUSD is 1,426. The number ofspecial education students is 106. Only 27 of the students enrolled in PUSD are not Native American.

The Navajo Nation covers approximately 24,000 square miles and includes the three states of Arizona, Utah and New Mexico. The Navajo Reservation is the largest reservation in the United States. Presently 200,000 of the 600,000 Navajos enrolled in the tribe reside on the reservation (Tsosie, 1990).

Purpose

The focus of this paper is the support services available to parents and guardians of students with disabilities within KUSD and PUSD on the Navajo Reservation. Support services for the parents and guardians in Kayenta and Pinon will be discussed.

Method

This study was conducted by students taking undergraduate special education teacher training courses in the Pinon Preparation Program (PPP) and the Rural Special Education Project (RSEP). Ten students are enrolled in the PPP and fifteen students are enrolled in RSEP. The students from these programs designed, implemented, and assisted in the data analysis of this study under the supervision of their instructors.

Forty-six interviews were conducted in person and 17 over the telephone, 26 surveys were hand distributed to individuals within the school districts. All but one parent had children enrolled in the KUSD or PUSD. All professional staff that worked in the KUSD and PUSD (counselors, administrators, special educators, classroom teachers) were all grouped as educators. The data includes information from over 30 parents, 30 educators and 20 professionals from community agencies. Over seventy percent of the participants in this study were Navajo.

Survey/Interview Questions for Educators

1. In which school do you work?
2. What is your current position and what is the age range of the children you are teaching or supervising?
3. What support services are available for the parents/guardians of children with disabilities?
4. How are parents/guardians made aware of what support services they may qualify for?
5. When are parents/guardians made aware of what support services they qualify for?
6. What outside agencies do you work with to provide services to the parents/guardians of students with disabilities?

7. How are parents referred to these agencies?
8. What additional services do you feel are needed in your community?

Survey/Interview Questions for Community Agencies

1. For which community agency do you work?
2. What is your current position?
3. What type of services does your agency provide?
4. What is the age range of the children you are providing services for?
5. How and when are the parents/guardians referred to your agency?
6. Describe how students with disabilities or parents/guardians qualify for services at your agency?
7. Are you aware of additional programs in the community for parent/guardians of students with disabilities?
8. What additional services do you feel are needed in your community?

Questions for Parents/Guardians

1. Are you a parent/guardian of a Navajo child with a disability?
2. If not the biological parents, how long have you been the caretaker of your child?
3. What is the nature of your child's disability?
4. What do you know about your child's disability?
5. Are you aware of the support services available to you as the parent/guardian of a child with a disability?
6. Will you provide us with three examples of services available to you or your child with a disability?
7. How are you utilizing these support services?
8. How did you become aware of these services (e.g., teachers, administrators, T.V., radio, other)?
9. What additional services do you feel are needed in your community?

Note: During the interviews, if the questions were not understood it was then restated in a simpler form or translated into Navajo.

Educator Responses

Of the individuals responding to question one (In which school do you work?) there were nineteen primary, ten intermediate, three middle and three high school teachers.

In response to question two (What is your current position?) about one-half of the teachers reported to be special education teachers, one facilitator for Arizona School for the Deaf and Blind (ASDB), one speech pathologist, five administrators, and the others were regular classroom teachers.

In response to question three (What support services are available for the parents/guardians of children with disabilities?) five educators indicated that they were not aware of what services were available to the parents of children with disabilities in the area of Kayenta. One educator responded "no services" were available in Kayenta. Two educators responded with Student Intervention Team/Student Assessment Team (SIT/SAT) and three educators indicated "support" groups. However, the majority of educators listed services from the following: occupational therapy, physical therapy, assistance for hearing impaired students, assistance for visually impaired students.

In response to question four (How are parents/guardians made aware of what support services they may qualify for?) 25 of the educators stated that they relied on SIT/SAT to refer parents to support services. The remaining responses included such answers as parent newsletters, personal contact and personal visitation.

When educators were asked question five (When are parents made aware of the support services they qualify for?), two educators said parents were informed through school personnel. However, most all educators knew parents were informed by the schools' Special Education Department. There was one educator that did not know how the parents were informed of services while another did not know that parents of children with special needs were informed at all.

Responses to question six (What outside agencies do you work with to provide services to the parents/guardians of students with disabilities?) were as follows: six teachers reported they did not work with outside agencies, two responded "I don't know." The remaining educators' responses included the following agencies: Indian Health Services (IHS), Behavioral Health Services, Department of Developmental Disabilities (DDD), Social Services, Arizona School of the Deaf and Blind, and the Special Service Consortium.

The data for question seven (How are parents referred to these agencies?) revealed the following means of referral: the special education department, KUSD, SIT/SAT, and IHS. Three people surveyed responded with "I don't know".

Responses to question eight (What additional services do you feel are needed in your community?) were as follows: support services, parent education, community education and respite care services.

Responses from Community Agencies

Of the individuals responding to item one (For which community agency do you work?), they reported to be employed by the following agencies: IHS, Behavioral Health Services , John Hopkins University in conjunction with Behavioral Health Service, Social Services, Family Assistance and Food Stamps (FA/FS) the Department of Economic Security (DES), Women, Infants and Children (WIC), Kayenta Police Department (KPD), and Special Services Consortium.

In response to question two (What is your current position?) there were nurses, community health workers, clinical social workers, service coordinators, health systems specialists, physical therapy assistants, family therapists, caseworkers, police officers, community nutrition workers and a human resource manager.

The responses to question three (What type of services does your agency provide?) varied according to the role of the agency. IHS included medical care at the clinic, physical therapy, counseling, emergency room care, and community home nursing care. Behavior Health Services included group counseling, individual counseling and family counseling. Social Service stated that their main role was foster care placement and early intervention services, which includes coordination of services for children with special needs. The WIC nutrition specialist managed cases for pregnant women, and mothers of infants/children seeking WIC coupons. The DES included supplemental income assistance for families of disabled children. FA/FS included referrals for income assistance and food stamps. The KPD service included criminal investigation and law enforcement.

In response to question four (What is the age range of the children you are providing services for?) the IHS workers stated that they provided medical care for infants to the elderly, Behavioral Health Services worked with children between the ages of five through adulthood. The John Hopkins Research Nurse worked primarily with infants from six weeks of age until they were two years old. The Social Workers and Family Assistance and Food stamp workers indicated they worked with various ages from newborns through the elders of the community. The WIC nutritional worker indicated that WIC provided services for pregnant women and children ranging from newborn infants to five years of age. The KPD did not report specific ages.

Data collected for question five (How and when are the parents/guardians referred to your agency?) indicates a perception of cooperation with community agencies and expressed that referrals are made through a number of resources. These resources included: the women's shelter, DES, family courts, Child Rehabilitative Services, the IHS clinic, Behavior Health Services, KUSD, KPD and Social Services. The data also reflected that many people "self-referred" or were referred by a family member .

In response to question six (Describe how students with disabilities or parents/guardians qualify for services at your agency?) the majority of responses indicated that those children identified with disabilities or developmental delays were put in the system at birth by physician referral. Children who later qualified for disabilities sometime during their school care were referred by the school district, family courts, or IHS. The referral process for older children indicated qualifying by several means, physician recommendation or qualify by a parental/guardian interview process. One IHS nurse stated that, "IHS works with KUSD to supplement services the school district is unable to provide".

Predominant responses to question seven (Are you aware of additional programs in the community for parent/guardians of students with disabilities?) were, KUSD, WIC, Social Services, IHS, DES and Behavioral Health Services. An additional service mentioned was the Department of Developmental Disabilities (DDD).

Responses to question eight (What additional services do you feel are needed in your community?) were expressed as follows: Youth Center for Special Needs Day Care, Services for the Blind & Deaf, Parental Education Services, family support groups, parent resource information, transportation services for the disabled, and group homes for the disabled.

The information reported above on community services was collected in Kayenta. Due to the smaller population of Pinon, most of the support services are provided through the school district. There is one small IHS office in Pinon, and the residents also receive services from the Chinle agencies, which are located about 45 miles from Pinon.

Responses from Parents and Guardians

All but one parent responding to question one (Are you a parent/guardian of a Navajo child with a disability) was Navajo, and all were parents of children with disabilities.

Responding to question two (If not the biological parents, how long have you been the caretaker of your child?) all participants stated they have been the primary caretaker for their child from birth.

The responses to question three (What is the nature of your child's disability?) were varied. Parents reported having children with learning disabilities, Down syndrome, mild mental retardation, visual impairments, deafness, autism, attention deficit/hyperactivity disorder, cerebral palsy, juvenile arthritis, Hunters disease, neuromuscular disorder, physical challenges, and developmental delays. One parent reported their child as gifted.

In response to question four (What do you know about your child's disability?) almost all parents clearly understood their child's disability, one knew little about their child's disability and one parent did not respond to the question. The majority of the parents/guardians were able to list more than five different characteristics/difficulties of their child. A few parents very confidently stated they knew all they needed to know about their child's disabilities.

In response to question five (Are you aware of the support services available to you as a parent/guardian of a child with a disability?) the vast majority of parents stated specific services available to them. Only one parent stated they were not aware of services and one parent said they knew of services available, but did not not use them.

Question six (Will you provide us with three examples of services available to you or your child with a disability?) responses indicated that parentswere aware of services available to them. Services that were frequently mentioned were ASDB, Parent Out Reach, IHS, and DDD.

According to the data collected for question seven (How are you utilizing these support services?) the most common response was that they were aware of and used services in their area. The majority of answers reflected that most of the services were obtained through the school district. Two most common services received outside of the school were IHS and DDD.

In response to question 8, (How did you become aware of these services (e.g. teachers, administrator, TV, radio, others?) most all parents responded that they became aware of available services through teachers, physicians, and school personnel.

In response to question 9, (What additional services do you feel are need in your community?) the parents interviewed gave various answers. The most frequently given responses were a monthly parent newsletter , Special Olympics or other organized activities, a good working public library or place they could do research.

Conclusion

The participants indicated that the two communities involved in this study are providing services for individuals with disabilities. For the most part, parents are well informed of the services available to their children and are using them. Also, it appears that collaboration between the school systems and various agencies is occurring to facilitate awareness and use of these services.

The parents did indicate a need to have more organized activities for their children or to be linked to other parents. We as educators need to constantly explore creative ways to involve these parents.

References

Jones, D., Prater, G., Miller, S., Gilmore, S., Harwood R., Morris, C., Badonie, N., Gilmore, B., Hall, T., Gilmore, L., Scott, D., Joseph, T., Tallis, B., & Wooll, J. (1997). Working with the Navajo parents of exceptional children. American Council on Rural Special Education Conference Proceedings. Oklahoma State University.

Storey, D. (1992). Family support [On Line] The Association of Retarded Citizens. Available http://thearc.org/fag/fam.sup.html

Tsosie, D.J.(1990). Population and housing characteristics of the Navajo Nation. Window Rock, AZ: A Navajo Government Publication.

Turl, D. (1998). Kayenta Unified School District English as a second language testing summary, 1998. Electronic Data Base. Kayenta, AZ: KUSD.

*The NAU Research Team consists of the following: Beach, M., Begay, M., Begaye, D., Bitsui, S., Blie, L., Bob, L., Bob, S., Castillo, T., Crank, C., Delmar, B., Denny, V., Dixon, L., Dove, M., Dugi, R., Fuller, D., Gilmore, E., Gonnie, J., Grochowski, J., Hoskie, L., Manygoats, C., Montoya, E., Mullins, J. S., Jim, O., Singer, R., Snyder, M., Webb, R., Zonnie, T.,

The Rural Special Education Project was supported by a grant to the Center for Excellence in Education at Northern Arizona University from the U.S. Department of Education, Office of Special Education and Rehabilitation Services, Division of Personnel Preparation (#HO29B50069). Additional support was provided by the Kayenta Unified School District. The opinions expressed in this article are those of the authors and do not necessarily reflect positions of the USDOE or KUSD.

Mary Susan E. Fishbaugh, Ed.D.
Linda Christensen, Ph.D.
Montana State University-Billings
Billings, Montana

KEEPING QUALIFIED SPECIAL EDUCATORS UNDER THE BIG SKY

Background

In 1986, Montana suffered an acute shortage of special education teachers. Despite recruitment efforts in and out-of-state, the lack of special education teachers had forced at least nine school districts to provide special needs students with non-endorsed teachers. Immediately evident was the problem that Montana's colleges and universities were not training enough people to meet the state's special education needs, especially in rural communities.

A pilot emergency endorsement program was initiated in 1987. The Office of Public Instruction (OPI) Special Education Endorsement Project grew out of this emergency plan of action. The Montana Comprehensive System of Personal Development (CSPD) spearheaded the development of the OPI program, which began in 1988 and was funded by federal monies.

Since 1988, the OPI Special Education Endorsement Project has certified a total of seventy-one teachers. A breakdown of the number of students enrolled each year is shown in Table 1. A study of the project based on the years between 1989 and 1993, demonstrated that the project was helping to meet Montana's special education needs. A four year follow-up has been completed showing progress made and the project impact since 1994. The present study includes interviews conducted with graduates of the project, administrators, mentors of project candidates, and students who were not able to complete their endorsement through the OPI Special Education Endorsement Project.

Interview Results with Administrators and Mentors

The following questions were asked of eight administrators who participated in the project either by mentoring a project candidate or employing personnel who were certified through the Endorsement Project. The responses listed reflect all the opinions given.

Did you have any teachers trained in the Project? How many?
The eight administrators interviewed employed a total of twenty-five students who were either currently in the project or had been certified through the project.

What do you think of this program?

All of the people interviewed agreed that this is an excellent program. Sample responses include the following:

- The program is a nice way to meet needs when there is a shortage of teachers.
- Great program. It offers a chance to take teachers who they know can do it, and get them certified.
- Excellent program. Would recommend it to any administrator.
- Exceptional program. Helped out in tight situations. Provided excellent staff members who are still on staff today.
- Like the structure and direction in providing teachers with training opportunities. Especially helpful to smaller, rural districts who have trouble finding qualified teachers.

Do you still see a need for this program in Montana?

All but one administrator agreed it is a much needed program, especially for the rural districts who have trouble filling special education positions. Two administrators stressed that it is needed now more than ever, and not only for the smaller districts but also for the larger ones. A position in a larger district was filled recently by an Endorsement Project candidate due to the inability to attract a beginning special education teacher. Early career teachers have a hard time living on their salary as the cost of living in larger towns increases. The administrator who expressed concern stated that they couldn't say for sure if the program were still needed. Having the option was good, but they had no present need to sponsor another student.

Are you satisfied with the performance of the teachers trained in this program?

All said they couldn't be more pleased with the quality and strength of the teachers whom they had hired. One felt students received more training through this program than through a regular endorsement program. One administrator felt that some type of summer program or short, two-day late summer training would be beneficial to those teachers who would be going out into the field with very little understanding of what to expect. They are weak in the beginning and really have no one else to turn to for help, especially in rural areas. When asked about district flexibility in letting teachers attend some type of training, the administrator felt this would not be a problem. The district would benefit from the teacher having a better idea of what they were going to face, what would be expected of them, and the paperwork they would handle.

Did you find the mentoring training and support for the teacher to be helpful?

All administrators felt the mentor training was very helpful and necessary for student support. It helped them feel more secure and connected to someone they could call if they ran in to problems. Those who had gone through the mentoring program felt the training they had and the contact and resources they were given were very good. They did find it to be an incredible amount of work, but felt if the mentors knew that from the start and were committed to the outcome it would produce, they would see the benefits. One mentor felt the forms needed to be updated. They also felt that the emphasis on candidate observation maybe misdirected. Most mentor time was spent answering questions and procuring resources or materials.

What would you like to see done differently? Additional comments.
The following suggestions and comments were made:

- The program needs to expand into the larger districts; they are having as difficult a time filling special education positions as smaller districts.
- The travel involved for mentor training was sometimes hard. Felt the MetNet session was a good idea and would like to see more. Also would like to see more direction for the mentors.
- There needs to be more awareness that the project exists! Target active special education teachers instead of administrators/principals who don't always pass along the information. Hopes the project keeps going and would be happy to give a letter of support!
- It would be helpful to set up some type of training for students before they begin teaching. They hope the program continues.
- This is a much needed program and hopes it is maintained and expanded, possibly into other specialized areas, such as speech therapy.

Interview Results with Project Graduates

"*Grateful for the opportunity to complete my special education endorsement while still being able to work*" was the prevalent response to the questions we asked of the teachers who had received their special education endorsement through this program. Ideas and suggestions were shared as to what areas of the project could be enhanced along with what areas of the project were most beneficial. Shown below are all the opinions given to each question that was presented to the fifteen project graduates who were interviewed.

Were you satisfied with the processing of your financial support for the program?
All the students said they were satisfied with the processing of their stipends and the time frame in which their money was received. Two students indicated that although they appreciated the money they received, it really was not enough to cover the cost of taking the classes, which not only included tuition, fees, and books, but also traveling costs.

Would you have gotten this degree if you had not received the OPI grant?
Nine students indicated they probably would have pursued their special education endorsement without the OPI grant. However, they also stated that the grant made a difference by easing the financial burden and gave them added incentive to attend. One student appreciated the difference it made in their request to transfer to a special education position, as it showed the district they were committed to a career move to special education. Six students said they probably would not have pursued their endorsement without this program.

Were you satisfied with the special education program at the college you attended?
Thirteen students said they were satisfied with the program at the college they attended. They liked the fact that many people from out in the field were brought in to teach their classes. They also appreciated the help and support they received from the contact person at the college they attended. Of those thirteen, four made the following comments:

- Yes, except for one summer session when a reading class required was not offered. The student had to attend another college and attend an extra summer session to finish.
- At times the way they offered classes made it difficult to complete the program in two summers.
- Wish there had been more courses on collaboration and inclusion required at the time they went through the program. They had no inclusion experience when they started teaching special education.
- The outreach programs were a great help in finishing her endorsement. Would like to see more of these, and possibly a way courses could be taken via computer.

Two students indicated they were not happy with their programs and cited the fact that a reading course was not available as they had originally been told, and that politics, power struggles and inconsistencies with the program made finishing their endorsement very frustrating.

Did you find your classes provided you with useful and practical information? Did they prepare you for the reality of teaching special education?
The overwhelming response to this question was yes, as much as possible, but nothing prepares you for being out in the field. Nothing beats reality and being on your own. Many indicated the co-teaching and practicum experience taught them the most. The information received in the classroom, for the most part, was helpful and gave them an overview of special education, along with legal and administrative requirements. It also provided them with resources for future use. Only one student expressed dissatisfaction with their program, stating that there was no practical information given and that the classes were bureaucratically oriented. They felt sorry for students who had never been in the field based on the lack of information they were receiving, and were glad they had some experience teaching special education.

Where did you do your student teaching?
Of the fifteen students surveyed, eleven were still teaching in the same school where they had done their student teaching. Of the four who were teaching elsewhere, three students taught through the MSU-Billings Summer Enrichment Program (no longer in existence). The fourth student accepted a position at a school closer to her home.

Was your student teaching a productive learning experience?
Thirteen students said that this was where they gained the most awareness and realization of what being a special education teacher was all about. One was especially grateful for being able to continue her job. Two students were dissatisfied

with their student teaching because they had already been teaching for two years. They felt student teaching was redundant.

Were you satisfied with the on-site mentorship program?
Fourteen students said they were very satisfied and liked this component of the program. One student was glad it wasn't "overdone" since they had already been teaching. The one remaining student expressed concern that the mentor did not provide the type of contact that made a difference for someone who had already taught.

Did you get a job or get to keep a job because of the OPI program?
Eleven students indicated they kept a position because of the OPI program. Four students were able to accept positions based on their program participation.

Where are you currently teaching? What are you currently teaching? Grade? Regular or special education? If you are not currently teaching special education, did you ever? (See Table 1 for responses.)

Any additional comments?
All fifteen students were very supportive and appreciative of the program. They were glad it was available to them and hope that it continues. Suggestions given to help improve the program included:

- Make classes needed for the project available at all times rather than on a rotating basis, as class times sometimes conflicted.
- Thought the program was wonderful and hopes it continues. An increase in the stipend amount given to students would help as costs continue to rise.
- Classes hard to get at some colleges. Feels more flexibility is needed.

Other Comments:

- Glad to see you can now get your endorsement and Master's at the same time. This was not available when they went through the project.
- Very appreciative of the program, but disappointed they had to go through certification again even though they had been teaching in another state.

Reasons Students Did Not Complete Program

According to records kept since 1988, a total of fifteen students either dropped out of the program or were no longer deemed eligible. Various reasons the students did not complete the program included:

1. The student chose to take another job closer to their home that was not in the area of special education.
2. The student was no longer employed and therefore was not eligible for the project.
3. The student received a teaching position in a regular education classroom and chose not to pursue a special education endorsement.

4. The student was not making satisfactory progress in the program and was granted a one year extension; satisfactory progress was still not made so student was no longer eligible.

Seven students who had dropped from the program were not available for comment.

Looking toward the future, we see an ever continuing and expanding need for programs such as the Special Education Endorsement Project. Montana's rural status, combined with its increasing population in larger areas, shows great potential for the expansion and growth of this project. We are proud of the accomplishments made in the last nine years. Our hope is that with an increased awareness of the project's existence, along with the growth of outreach programs and telecommunications, we will see an increase in the number of teachers wanting to obtain their special education endorsement while continuing to work in the field. We will be able to meet that need through expanded programs and on-line communication.

Table I
Results of Survey/Statistics - 1988 to 1997

	1994-1997	1988-1993	Total	%
Students accepted	48	62	110	
Students completed and teaching	21	50	71	65%
Special education only	12	31	43	61%
Regular/special education/Title 1	4	3	7	10%
Regular education or Title 1	2	6	8	11%
Not teaching	2	3	5	7%
Status unknown	1	7	8	11%
Teaching location of students surveyed				
District of origin	5	5	10	67%
Have moved from district	4	1	5	33%
Students in progress	24		24	
Teaching special education	19		19	79%
Teaching regular ed. or Title 1	1		1	4%
Teaching regular & special ed.	4		4	17%
Students who did not complete project	3	8	11	1%
Students who lost eligibility	0	4	4	.03%

Loretta Pfluger
Jenny Hendricks
Region 16 Education Service Center
Amarillo, TX 79120

INCLUDING RURAL DISTRICTS IN INCLUSIVE STAFF DEVELOPMENT

Educating students receiving special education services in integrated settings is an outcome that requires intensive staff development and on-going training. When considering how to assist campus staff in becoming knowledgeable and comfortable with inclusive practices, King-Sears (1997) states there are four foundational components necessary for inclusion to succeed. These are (a) shared vision, (b) information about the change process, (c) preparation, and (d) on-going support (p. 3). She also states, "Preparation and ongoing support are intertwined; one should not occur without the other" (p. 4). Recommendations such as these helped shape the staff development offered on inclusive practices to the rural districts in the Texas Panhandle.

Introduction

Region 16 Education Service Center (ESC), centrally located in the Texas Panhandle, is one of 20 ESCs in Texas. Services to 65 school districts in 26 counties covering 25,500 square miles are provided by Region 16. Average daily attendance for all 65 school districts is approximately 80,000 students. Amarillo, Region16's headquarters, has the largest school district with over 30,000 students, while the smallest district serves fewer than 30 students. The Region 16 service area is large and rural. For example, the district farthest from Region 16 is 150 miles away, nearly a three-hour drive and has one K-12 school with 176 students.

The Texas legislature provided the impetus for all school districts in Texas to provide on-going and follow-up staff development and services to school district personnel in support of serving students with disabilities in integrated settings. In 1995, a $10 million general appropriations bill directed the Texas Education Agency (TEA) to use the regional education service centers as the primary providers for the implementation.

In the spring of 1996, the first step in developing Region 16's regional plan was to identify individuals to serve as focus group members. These stakeholders were nominated by 19 special education administrators representing 65 school districts and became the Focus Group Steering Committee. This group consisted of school administrators, general education and special education teachers, Region 16 staff, as well as representatives of The ARC, Texas Panhandle Mental Health Authority, Partnerships for Assisting Texans with Handicaps (PATH), Uniting Parents, West Texas A&M University, and the Texas Department of Health-Region 1. During this time, the Region 16 staff identified the need for an outside facilitator. The services of consultants from Stetson & Associates of Houston, Texas, were acquired.

The focus group met in February 1996 with a consultant and identified: (a) the most significant issues in meeting the needs of the diverse learner at the classroom, campus, and district level; (b) services and products most needed from the ESC to ensure continued success of the diverse learner in an inclusive setting; (c) services and service delivery characteristics offered by Region 16 found most helpful in supporting the diverse learner in inclusive settings; and (d) suggestions for changes in Region 16 services to support diverse learners in inclusive settings.

The next step was the development of a needs assessment survey, "Creating the Vision--Charting the Course," which was mailed to superintendents, special education administrators, and principals. They were asked to share copies with other appropriate personnel. The respondents were to rank: (a) items identified by the focus group as important issues currently faced in meeting the needs of the diverse learner at the classroom, campus, and district level; and (b) the preferred service delivery model.

Some of the results identified were: (a) the need for specific "nuts and bolts," activity-based staff development in effective instructional strategies/methodologies to meet the needs of the diverse learner in an inclusive setting; (b) time for general and special educators to plan; (c) the need for advance planning and staffing prior to conducting an ARD; (d) the need for parents to be included as "team members" in the IEP development; (e) the need for a process to determine if existing staff are being utilized most effectively; (f) the need for building administrators to understand inclusive education, its philosophy, and support its implementation; and (g) the need for the use of innovative, instructional strategies/methods in inclusive settings to meet the needs of the diverse learner. The focus group preferred initial training to be held at the campus or local education agency (LEA) with follow-up visitations.

The focus group's survey asked the respondents to priority rank the services and products most needed from Region 16 to facilitate the continued success of the diverse learner in inclusive settings. High priority items included: (a) sharing of "best practices" regarding instructional strategies, behavior management, and teaching methodologies; (b) teacher/staff training with follow-up; (c) parent training; (d) teacher training presented jointly by special and general educators; and (e) continued payment of stipends for teachers and substitutes attending training.

The respondents were then asked to rank a list of priorities for summer training sponsored by Region 16. The top priority items included (a) co-teaching, (b) effective modifications for the diverse learner, (c) paraprofessional training, (d) effective use of staff, (e) building-level administration training regarding inclusion, (f) how to schedule support for students educated in inclusive settings, (g) behavior management, (h) training on how to include the medically fragile child, and (i) training general educators on legal issues.

Next, the respondents were asked to rank the priority of items the focus committee suggested as changes in Region 16 services needed to support diverse learners in integrated settings. The highest priorities were: (a) have Region 16 presentations include a "modified strand" showing how strategies/programs can be used with the diverse learner; (b) provide in-depth paraprofessional training regarding instructional methodologies, working cooperatively, and meeting specific students' needs; (c) continue summer pay for paraprofessionals and teachers attending training sessions; (d) provide on-site, intensive technical assistance for specific students; and (e) videotape teaching activities at inclusive education sites to develop a video library of "best practices."

The results of the needs survey were compiled by Stetson & Associates and provided the focus group with the necessary information on how to accomplish the TEA performance goals of: (a) develop capacity in all districts in the Region to serve students with disabilities in integrated settings; and (b) provide on-going and follow-up professional staff development and services to school district personnel in support of serving students with disabilities in integrated settings (R. Scott, TEA interoffice memorandum, December 6, 1995).

Method

From the survey results, the following components were identified as the framework for Region 16's service delivery model.

Cluster Site Training

Cluster site training was seen as the foundation for Region 16's plan. Campus and LEA training with follow-up was the preferred service delivery model for all of the critical issues addressed. It also required the most funding and personnel.

In 1996, six days of training were scheduled over a three-month period. Special education administrators were offered the opportunity for their districts to be host sites. Six cluster sites were identified with one site hosting two sessions. The sites were located throughout the Panhandle so travel time was greatly reduced for the attendees. The districts were requested to send campus teams comprised of an administrator and both general and special educators. Any other interested parties also were able to attend. The participants could attend sessions at any location. The target size for each site was 30 to 40 participants. To strengthen their commitment to this phase of the project, incentives were provided to the participants, including (a) payment of a daily stipend to each participant for training attended in the summer months, (b) reimbursement of substitute pay to districts whose teachers attended training during the school year, and (c) awarding teaching materials to each team whose members attended all sessions. Out of 44 campuses, 11 campus teams had all members present at all sessions. Region 16 contracted with Stetson and Associates to provide trainers for all the sessions. The participants gave high ratings to Stetson & Associates consultants and their materials and appreciated the stipends and substitute pay. A total of 215 teachers and administrators representing 44 campuses attended the sessions, including one campus with 100% staff participation.

During the summer of 1997, the cluster training again was offered to school districts and their staff. Six host sites were identified with two sites offering the training twice for a total of eight sessions. In response to feedback from the 1996 training, these sessions were consolidated to five consecutive days with all of the training offered during the summer months. Stipends were offered and Stetson & Associates provided the training and materials. A middle school campus had its entire staff attend the training, including office staff. A total of 313 administrators and teachers representing 39 campuses attended the 1997 sessions and provided high marks for the training.

The sessions held during the summers of 1996 and 1997 included the high priority topics originally listed by the focus group and survey respondents. The topics were:

Meeting the Needs of Diverse Learners: During this activity-based training, participants developed a common vocabulary related to inclusive education, identified a continuum of instructional settings and support needs, examined myths surrounding inclusive education and developed a philosophy for serving all students at their campus. Ten elements common to inclusive schools were contrasted with the current status of teams' campuses.

Support Models for Inclusive Education: Participants identified external and in-class models for supporting students in general education classes. Predictable issues arising from implementation of the models and strategies to address these issues were investigated. Participants discussed the different models of co-teaching and reviewed such practical issues as compatible philosophies, personality styles, teaching approaches, flexibility quotients, and personal "non-negotiables" as teachers.

Support, Staffing and Scheduling: This presentation reviewed information and practical tools for campuses to (a) determine the educational opportunities for implementing IEP objectives in the general education classroom, (b) determine the types of supports individual students need to be successful in the general education classroom, (c) investigate methods to determine the staffing needs to support students in general education classes, and (d) schedule staff for providing the required level of support.

ARD/IEP Process: During this session, participants conducted an analysis of the IEPs currently being utilized in their districts and reviewed them for "quality indicators." Additionally, participants discussed the appropriateness of targeted objectives.

Creating the Winning Classroom: Participants identified current behavioral challenges existing at their campuses and learned six strategies for providing a proactive approach to handling behavior issues on their campus.

Creative Solutions: Participants identified current barriers to quality inclusive education on their campuses and generated solutions to these barriers. In campus teams, participants rated their campuses in relationship to a "Best Practices Checklist for Inclusive Education" and developed an "Inclusion Team Action Plan."

Demonstration Sites

The next component of Region 16's plan involved campuses being identified as demonstration sites. The phrase "works in progress" was used to describe these campuses. As they further enhanced their efforts in educating students with disabilities into integrated settings, these campuses were entitled to receive: (a) year-long targeted, on-site technical assistance from Region 16 ESC; (b) in-depth training specific to individual campus needs; and (c) funds to attend conferences or workshops addressing inclusive strategies or on-site visits to other campuses with exemplary inclusionary practices. The demonstration campuses were responsible for (a) identification of campus needs related to inclusion, (b) development of a campus inclusion action plan based on and aligned with the campus improvement plan, (c) evaluation of progress completed on the action plan with ESC staff, (d) dissemination of information regarding inclusionary practices to their entire campus, (e) video taping of successful examples of inclusion on their campus, and (f) serving as an observation site for visitors from other campuses.

During the 1996-97 school year, six campuses were selected as demonstration sites. This group consisited of one high school, one middle school, one intermediate school, and three elementary schools. These same campuses requested to continue as demonstration sites during the 1997-98 school year at the Level II status. They continued to receive technical assistance but did not receive travel funds. The new demonstration campuses, Level I, included a high school, one junior high school, three middle schools, one intermediate school, and one K-12 school.

The individualized technical assistance for these campuses was well received. Each campus determined the type of technical assistance needed. This assistance included small group meetings with general and special education teachers, attendance at grade level team meetings, classroom observations with assistance to individual teachers or individual students, presentations at faculty and board meetings, and consultation with individual administrators to discuss staffing and scheduling concerns. Stetson & Associates consultants provided most follow-up visits, thereby providing a strong personal and professional connection to the schools.

Administrative Seminars

The third component of the regional plan involved administrative training. The focus group felt this was a key factor in successfully including students with disabilities into integrated settings at any campus. Training provided included (a) the summer cluster site training with campus teams, (b) Superintendent's and Principal's Fall Retreats in 1996, (c) Planning for Inclusive Schools--Demonstration Sites Administrator Meetings, (d) Demystifying Inclusion: A Special Session for Campus Administrators, and (e) Techniques for Including Students with Disabilities: A Step-by-Step Pracitcal Guide for Administrators.

Video Library

Developing a video library was the fourth component of the regional plan. Region 16 staff purchased a number of training videos now available for loan. Participants at several training sessions previewed books, videos and other training materials. Moreover, a resource guide for these materials was published and disseminated. Region 16, working with KACV-TV, the local public television station, produced a video showing promising inclusionary practices at schools throughout the Region 16 area. It is available for faculty, parent, and community meetings.

Cadre of Inclusion Experts

The final component of Region 16's regional plan involved the Cadre Training of Inclusion Experts. The special education administrators were asked to select both a general education teacher and a special education teacher who had attended the summer training to attend this specialized training on assisting their peers with inclusionary processes. The main emphasis was to make them aware of resources and materials available on inclusion and to develop a network of support.

In addition to the items listed in the regional plan, other types of support have been available to all districts in the Region 16 ESC service area:

1. "The ABC's of LRE"-- This newsletter was sent two times annually to the participants of the summer training sessions and all principals. Information concerning future training, campus highlights, and success stories have been included.
2. "Inclusion Alliance"-- These half-day sessions were offered each semester to elementary and secondary teachers. These were available to all districts and highlighted specific campuses that have been successful with their inclusion efforts or specific strategies. Practical applications of successful strategies were stressed with sharing of information on a teacher-to-teacher level.
3. Additional training opportunities have included (a) Differentiating Instruction in Mixed Ability Classrooms, (b) A New Look at L.I.F.E. (Learning in Functional Environments), (c) Content Mastery Training, (d) Using Cooperative Learning to Facilitate Inclusion, (e) Foundational Training for Paraprofessionals, (f) Working as a Paraprofessional in an Inclusive Setting, and (g) Solutions for Inclusion Confusion-- 1997 Texas Panhandle Middle School Association Fall Conference.

Results

In the development of the regional plan, Region 16 was asked to identify the evaluation design to be used. While a process evaluation was utilized to measure activity implementation, the major emphasis has been to determine the extent to which the districts served by Region 16 serve students with disabilities in integrated settings.

Baseline data from the demonstration campuses was obtained in the spring of 1997. Two instruments were used: (a) a faculty survey and (b) a statistical look at changes that have occurred at the campus level concerning student placement and the use of personnel for internal support. Stetson & Associates developed both.

The "Survey of Perceptions about Inclusive Education" was given to the entire faculty at the six demonstration campuses during the 1996-97 school year. The 26 items were ranked in the ranges of strongly agree to strongly disagree. The composite percentages of agreement are as follows:

Q1: Regularly plan together	43.8%	Q14: Knowledgeable of contents of IEP	76.9%
Q2: Together can solve any problem	78.7%	Q15: Total faculty feels responsible for all stud.	71.9%
Q3: Sufficient planning time	35.5%	Q16: Increased collab. between gen. ed. & sp. ed.	74.3%
Q4: Sp. Ed. integral members of faculty	66.5%	Q17: Increased sp. ed. support in gen. ed. classes	65.3%
Q5: Amt. of time sp. ed. in classes increased	67.9%	Q18: Increased ownership for all students	71.3%
Q6: Confident possess skills for diverse learners	74.0%	Q19: Increased comfort level for meeting diverse needs	58.3%
Q7: Predominant model is lecture	46.5%	Q20: Increased use of highly effective strategies	68.0%
Q8: Faculty uses variety of effective instruc. tech.	93.1%	Q21: Increased time for sp. ed. stu. in gen. ed. classes	85.3%
Q9: Stu. with disab. should receive serv. in gen.ed.	87.7%	Q22: Increased oppor. to interact with typical peers	88.5%
Q10: If parent, would want child to be in gen. ed.	75.3%	Q23: Decreased office referrals	44.6%
Q11: All benefit when stu. ed. in same classroom	78.3%	Q24: Increased success for sp.ed. stu. in gen ed. class	69.7%
Q12: Responsibility of sp. ed. to modify	79.8%	Q25: Increased achievement for sp. ed. student	68.2%
Q13: Responsibility of gen. ed. to modify	65.9%	Q26: Increased achievement for all students	58.5%

The survey results overall were very positive toward inclusive education even from respondents who had not attended the training sessions. Areas that need further consideration relate to sufficient planning time, providing special education support in general education classes, and meeting the needs of the diverse learner.

Additional data collected from the six demonstration campuses compared 1995-96 with 1996-97 services. The measurement tools examined:

#1 Assignment of Special Education Personnel in the General Education Classroom;
#2 Referrals for Special Education Services as a Measure of Increased Ownership;
#3 In-Class Support and Home Campus Data;
#4 Review of Changes in Time in the General Education Classroom for Special Education Students.

BEST COPY AVAILABLE

A summarization of the findings are listed in the chart below:

Demo. Campuses	% of staff providing in-class support '96 v. '97	# of minutes providing support in gen.ed. class per wk	# of referrals to sp. ed. '96 v. '97	% students receive sp. ed. support in gen ed. classroom '96 v. '97	% of increased # minutes in gen. ed. classroom
A	0 / 29	+ 810	Not reported	75.8 / 74.3	+ 76
B	0 / 67	+ 720	21 / 14	0 / 56	+ 56
C	0 / 63	+ 2,665	21 / 13	0 / 60.5	+ 50
D	75 / 44*	+ 320	15 / 10	66 / 87	+ 29
E	0 / 44	+ 30	10 / 8	0 / 67	Not reported
F	13 / 50	+ 5,160	24 / 11	6 / 46	+ 38

*Decrease due to the loss of a faculty position.

Positive results were shown in all categories. The data will be examined again during the 1997-98 school year to determine trends.

Discussion

The National Center on Education Restructuring and Inclusion (1995) found there has been a significant increase in the number of schools instituting inclusive educational programs. Moreover, positive educational results for both general and special education students as well as educators were reported. Similar results have been found in the Texas Panhandle. The statistical data shows the students are increasingly being served in the general education classroom with special education support. Anecdotal comments from faculty at the demonstration campuses list many positive experiences for the students, both general and special education, and for the faculty. An upcoming highlight will be at the "Inclusion Works! 1998" conference; two Level II Demonstration Campuses will be sharing the changes that have occurred with their students and staff that have been a result of the training and follow-up technical assistance offered by Region 16.

A greater impact has been possible by following the focus group's recommendations and providing intensive training and follow-up at cluster sites. Many of the participants stated that they were able to attend the training only because it was scheduled in their district. The rural nature of our service area demands the use of this model for effective staff development.

References

King-Sears, M. (1997). Best academic practices for inclusive classrooms. Focus on Exceptional Children, 29, 1-22.

National study on inclusion: overview & summary report. (1995, Fall). Bulletin - National Center on Educational Restructuring and Inclusion/ The Graduate School and University Center/ The City University of New York, 2, 1-8.

The authors acknowledge the invaluable contributions of Frances Stetson, Donna Adams, and Martha Bissett-Drewyer of Stetson & Associates to this project. Their combined expertise has been an enormous asset to the success of our schools.

Suzanne M. Martin, Ph.D. &
Wilfred Wienke, Ed.D.
West Virginia University
Morgantown, West Virginia

PREPARING TEACHERS TO WORK WITH CHILDREN AND YOUTH WITH EMOTIONAL/BEHAVIORAL DISORDERS (EBD) IN RURAL SETTING THROUGH THE USE OF TECHNOLOGY

Preservice Personnel Needs in Behavioral Disorders

"While significant progress has been made toward providing a free appropriate public education to students with disabilities and improving results for these students, several challenges remain." (Eighteenth Annual Report to Congress on the Implementation of The Individuals with Disabilities Act, 1996, p. i) One challenge that is highlighted in the Eighteen Report to Congress (1996) is inclusion of children and youth with emotional/behavioral disorders (EBD) in the regular education setting. Recent data from the Report indicate that fewer than 0.73% of school-age children during the 1994-95 school year received services in the category of seriously emotionally disturbed down from the 0.89% served in the 1990-91 school year. Guetzloe (1997) reports the Children's Defense Fund claim that "two-thirds of youngsters with BD are not receiving services they need, and countless others get inappropriate care" (p.1). Programs for these students are cited as being inadequate and in short supply (Knitzer, Steinberg, & Fleisch, 1990). According to the Eighteenth Annual Report to Congress on the Implementation of the Education of the Handicapped Act (1996), the number of uncertified teachers and vacant teacher positions for all special education categories in the 50 states is 24,459, whereas the number of uncertified teachers and vacant teacher positions of seriously emotionally disturbed students in the 50 states 3,933, representing 16% of the need for special education teachers (The Eighteenth Annual Report to Congress on the Implementation of Individuals with Disabilities Education Act, 1996).

Personnel preparation issues for students with EBD take on an additional need when trying to meet the needs of rural communities, as are many communities in the state of West Virginia. In reviewing the learning characteristic of rural students, Fitzgerald and Bloodsworth (1996) found these students to have particular learning styles. Specifically, these students were seen to have a strong preference to cooperate with others. Obstacles in implementing a comprehensive teacher preparation program, particularly in the area of EBD, often are more difficult to overcome in rural communities. The rural culture, or idea that "we take care of our own", is indeed a factor. Outside assistance is frowned upon and often shunned based on this thinking. Not accepting or feeling the need for outside help leads to lack of social, psychological, and family counseling services in many rural settings. Economic and social difficulties are also part of the rural picture (Helge, 1991). Discussions in a brain storming with eight Masters level teachers in preparation for students with EBD confirm these findings. Issues such as transportation, lack of knowledge of E/BD issues, lack of collaboration, poverty, less opportunities, job loss, and difficulty in service provision and delivery are but a few of the points these teachers made when thinking of the obstacles that stand in the way of providing positive, wrap around services for the E/BD population. The practicum and prepractica setting provided in this program place teachers in training in six rural counties in West Virginia. These practical experiences provide the participants ample opportunity to experience and learn about the rural nature of settings.

Theoretical Base:

The education of students with BD and the preparation of personnel needed to meet the needs of these students is a high priority for the U.S. Department of Education, most state departments of education, and many professional organizations. Evidence of this priority can be found in the Eighteenth Annual Report to Congress (1996), the West Virginia Comprehensive System of Personnel Development Report (1996), and the Children's Defense Fund report "Unclaimed Children" (Geutzloe, 1997), all of which are current efforts to better define and articulate the needs of children with emotional and behavioral disorders. Providing services for these children in regular classrooms as a part of the responsible inclusion initiative presents another challenge which previously has met with limited success (Harvey, 1996; Peacock Hill Working Group, 1991). Greater success in preparing personnel to respond to children with BD in a broad range of settings is expected to contribute significantly to the quality and quantity of services available to these students (Harvey, 1996).

The BD Project:

The behavior disorders project at West Virginia University prepares general educators to serve children and youth with EBD. The project uses a problem solving approach with cutting edge technology as part of its preparation program. The practica experiences in this program are implemented in three different rural settings at three different educational levels (K-5, middle school, high school). Different service delivery options are provided through the participation of different school districts. These opportunities provide the students in the program greater opportunity to transfer skills learned to other rural settings. Additionally, the graduate students in the project can access tremendous amounts of information via technology. The technology uses video laser discs and computer programming to allow the graduate students to view segments of films in many different settings where students with E/BD are interacting with other students and where professional are discussing appropriate programming for these students. Six learning stations are housed in the College of Human Resources and Education computer lab. The technology provides the graduate students with: 1) interaction time with other professionals via the computer/laser disc technology; 2) virtual observations of students with E/BD; 3) access to the records of the students with E/BD; 4) attendance at virtual meetings concerning the education of the students with E/BD; 5) note taking ability to answer questions about the students with E/BD; 6) ability to hear and/or view the different philosophical underpinning of experts in the field of behavioral disorders; and 7) ability to respond to his/her professor via computer disc. Additional objectives of the BD project are to disseminate the program information concerning the use of technology in the preparation of teachers for student with E/BD in a rural state and to demonstrate the technology used in the graduate program for the preparation of teachers for students with E/BD at West Virginia University.

Impact of Program

In their discussion concerning the preparation of teachers for students classified EBD, Whalen and Simpson (1996) center on the importance of producing effective outcomes for teachers. The program at West Virginia University has provided a greater capacity to prepare teacher who can better serve children and youth with EBD and has increased the number of highly qualified teachers to serve students with behavioral disorders in inclusive, rural settings. These opportunities provide the students in the program greater opportunity to transfer skills learned to other rural settings.

The positive effects of using cutting edge technology to prepare teachers for inclusive classrooms can not be overstated. The technology provides opportunities for graduate students to see children and youth with serious emotional problems that they otherwise may never observe. The opportunity to interact with these classroom segments on the video-

BEST COPY AVAILABLE

laser disc allows the graduate students to learn appropriate techniques in a virtual setting. The activities completed with the technology prepare the students for the real settings of their practica.

The project has graduated 16 Master's' level teachers in the area of E/BD and currently is preparing a cohort of eight more general education teachers to work with children and youth who have E/BD. The project has increased the number of highly qualified teachers to serve students with behavioral disorders in inclusive, rural settings. The project has improved and continues to improve the quality of the preparation offered students by integrating field experience with the problem solving skills courses, providing advanced skills and knowledge in inclusion programming, and developing instructional products for use in inclusion settings. Of the 16 graduates, all are employed in classroom that include students with behavior disorders. The far reaching effects these graduates have on the education for children and youth with E/BD ripples throughout all local service delivery systems for the students and their families. The current graduate students will complete their program in August of 1998.

In an attempt to assess the impact of the program, graduates and current participants in the program were surveyed as to the value of the technology used in their teacher preparation. When asked, "What would you see as the value of the technology used in the BD project?" responses varied but all pointed to the impact of the technology use. Statements such as, "The technology served as an 'eye' into the operation of classrooms serving BD students."; "It let us examine computer programs/tools to enhance student learning for our own classrooms."; "The technology used in the BD grant/program was extremely useful."; "The laser disc program used in case studies brought observations right to us - we were able to discuss and revisit them at length during our learning." "The technology helps us to be better prepared for schools." "It was a change from the norm."; "It reinforces the curriculum."; "It provides you with a wider knowledge base."; and "From this base new ideas and creativity can be utilized in your teaching." were common responses.

Well prepared teachers are one of the main keys to successful inclusion. The BD program described in this paper works towards meeting the challenge of creating a teacher preparation program that truly prepares teachers for inclusive settings (Bondy, Ross, Sindelar & Griffin, 1995) while helping school districts to meet local, state and national priorities for serving these special students. It strives to meet the needs Guetzloe (1997) described by preparing teachers to better identify and better serve students who experience E/BD problems. General education teachers are the participants in the program and thereby bring to the table knowledge and skills of general education curriculum and in instruction. Their knowledge and skills they bring to the program, in addition to what is learned throughout the program, contribute to high quality education for all children and youth. The teachers prepared in the BD program are ready to collaborate, implement program plans, provide positive learning opportunities for all students, and achieve better results for children and youth with E/BD.

References

Bondy, E., Ross, D., Sindelar, P., and Griffin, C. (1995). elementary and special educators learning to work together: Team building process. Teacher Education and Special Education, 18(2), 91-102.

The Eighteenth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (1996). Washington, D.C.: Author.

Fitzgerald, G. & Bloodsworth, G. (1996). Addressing the neglected needs of the rural learners: A learning style approach. Clearinghouse, 69, 169.

Guetzloe, E. (1997). What's happening on the hill: Its not a good IDEA. The Council for children with Behavior Disorders Newsletter, 10(5), 1, 4-8.

Harvey, V.S. (1996). Educators perceptions of effectiveness of programs for students with emotional and behavioral disorders. Behavioral Disorders, 21 (3), 205-215.
Helge 1991

Peacock Hill Working Group. (1991). Problems and promises in special education and related services for children and youth with emotional or behavioral problems. Behavior Disorders, 16, 299-313.

West Virginia Department of Education. (1996) Comprehensive System of Personnel Development Report. Charleston, West Virginia.

Whelan, R. & Simpson, R. (1996). Preparation of personnel for students with emotional and behavioral disorders: Perspectives on research foundation for future practice. Behavioral Disorders, 22 (1), 49-54.

Let's Talk about the Needs of African American Children with Sickle Cell Disease: A Recognized 'Other Health Impairment'

Elizabeth A. Dooley and Nechelle Perkins West Virginia University

Most cases of sickle cell disease in the United States occur among African Americans, and Hispanics from the Caribbean, Central America and parts of South Africa. It is estimated that 1 in every 400 African Americans inherit sickle cell disease. Children who inherit sickle cell disease are at risk for more serious medical conditions and require special care both in and outside the home environment. Because of the nature of care required, narcotic analgesic usage and repeated absences from school, children with sickle cell disease may experience academic related problems, and may need tutoring or an Individualized Educational Plan (National Institute of Health, 1995).

Since sickle cell disorders occur most frequently among African Americans, many professionals, namely teachers may not be aware of the nature of the disease, or how the disorder affects the child's learning when the necessary accommodations are not provided. This lack of knowledge may lead to an ongoing struggle between the parents and teacher, unnecessary bouts of sickness, increased absences from school, and ultimately skill gaps in the child's learning. The irony of it is that sickle cell disease is recognized as an Other Health Impairment (OHI), and students may be eligible for special education services. Yet, some individuals may not be willing to address sickle cell disease because they fail to relate to it as being an OHI. Thereby, do not consider the requirements of the law that are in place to protect the child.

The Individual with Disabilities Education Act (IDEA), (1997) recognizes Other Health Impairments as a disability. Under IDEA, students identified as having other health impairments have a right to a free and more specifically an appropriate education. Also, stipulated, is the provision that requires agencies to "search and find" those students who may be eligible for Special Education services.

OHI has been further defined as a condition or disease that interferes with a person's functioning (Hardman, Drew, Egan, & Wolf, 1990). To aid in the early identification of students who may require special education is the use of referrals as a search and find tool. These referrals may come from a variety of sources (Underwood, Mead, 1995). These may include medical personnel, teachers, parents and social agency workers. While the law recognizes Other Health Impairments (OHI) as a disability, it does however fail to operationalize procedures to insure proper identification, and the means by which special accommodations are made.

Hardman et. al (1990) noted that children with sickle cell anemia should receive consideration and special care. "Teachers need to be alert to signs of anemia and other conditions that may precipitate a crises", (p. 398). While Sickle Cell Disease is recognized as an other Health Impairment, a student with Sickle Cell Disease may not exhibit learning or behavior problems or a developmental delay and may not meet special education eligibility criteria. Because the child does not meet certain requirements, we cannot, at this time, justifiably deny the child access to an appropriate education. On the basis of what we do know about Sickle Cell Disease, there is a need for special considerations and accommodations during the school day. The accommodations will aid in avoiding medical crises that may provoke educational risks.

Description And Management Of Sickle Cell Disease

According to the National Institute of Health (1995), Sickle Cell Disease is a generic term for a group of genetic disorders characterized by the predominance of hemoglobin S (Hb S). These disorders include sickle cell anemia, the sickle beta thalassemia syndromes, and hemogloginopathies in which Hb S is in association with another abnormal hemoglobin that not only can participate in the formation of hemoglobin polymers but is present in sufficient concentration to enable the red

> cells to sickle.... The sickle disorders are found in people of African, Mediterranean, Indian, and Middle Eastern heritage. In the United States, these disorders are most commonly observed in African American and Latinos from the Caribbean, Central America, and parts of South America. Sickle Cell Disorders are best classified by genotype. The type of hemoglobin produced is determined by the two beta globin genes located on chromosome 11 and the four alpha globin genes located on chromosome 16.... In the case of Sickle Cell Hemoglobin (SC Disease) the individual has two abnormal beta globin genes, *βS and βC*, and makes two abnormal hemoglobins, Hb S and Hb C. Because the alpha globin genes are located on a different chromosome from the beta genes, a patient could also inherit an alpha globin gene abnormality. The most common abnormality, and one that has clinical significance for patients with sickle cell disorder, is the deletion of the alpha globin genes. (p. 1)

The National Association for Sickle Cell Disease (1997) reported that sickle cell disease is an inherited blood disease that can cause bouts of pain, damage to vital organs, and for some, death in childhood or early adulthood. Sickle Cell Disease is hereditary; "It occurs when a person inherits two sickle cell genes or a combination of one sickle cell gene plus any one of several other abnormal hemoglobin genes that affect the red blood cells " (p. 1). To make up our pair of hemoglobin genes, we get one gene from each parent. Each of our parents has two genes for hemoglobin, but only one of these genes is passed on to each child, and no one can determine the gene that will be inherited; it is a matter of chance. A child must get the sickle (S) gene from one parent and sickle (S) hemoglobin C (C), and a beta thal (B) gene from the other parent (National Institute of Health, 1995).

Now in the case when a baby inherits at least one hemoglobin A (usual adult hemoglobin) gene, he will not get sickle cell disease. Carriers of a single cell gene have a sickle cell trait. They are healthy, and rarely have medical problems related to the trait. Furthermore, they cannot, later acquire sickle cell disease (National Association for Sickle Cell Disease, 1997). This trait could be AS (sickle cell trait), AC (C trait) or AB (Beta thal trait). In addition, there are other less common traits (National Institute of Health, 1995).

Areas Affected by Sickle Cell Disease

Sickle Cell Disease is a disease that affects a special protein inside our red blood cells called hemoglobin. Red blood cells have the important job of picking up oxygen from the lungs and taking it to every part of the body. It is the hemoglobin in these cells that carries the oxygen to different parts of the body. A person with Sickle Cell Disease makes a different kind of hemoglobin. This causes the red blood cells to change their shape. Instead of being smooth and round, the cells become hard and sticky. Their shape looks like a banana or like a sickle, a hand tool used to cut wheat or tall grass. It is this sickle shape of the red blood cells that gives "sickle cell" disease its name. The hard, sticky sickle red blood cells have trouble moving through small blood vessels. Sometimes they clog up these blood vessels so that blood cannot bring oxygen to the tissues. Without oxygen, the area begins to hurt and may become damaged (National Institute of Health, 1995).

Medical Problems Associated with Sickle Cell Disease

One of the most serious problems that people with Sickle Cell Disease have is infections. Infections, like pneumonia, pose a special problem for infants and small children who can get very sick or even die if they do not get prompt treatment. These infections are caused by problems with the spleen, the biggest lymph node into the body. Lymph nodes, like the spleen, help the body kill germs. The sticky sickle cells will clog the spleen so it cannot do its job. This leaves the body vulnerable to infections. In addition, the sickle shaped cells are pulled out of the blood and break down faster than regular red blood cells. As a result, the body cannot make enough new red blood cells to replace the old ones. This decreases the number of red blood cells and the amount of hemoglobin in the body. This "low blood count" is called anemia; if the anemia becomes severe, the child may need a blood transfusion to prevent heart failure and other problems. Over many years, the lack of oxygen due to clogged blood vessels can lead to tissue damage. This damage can happen to any organ. While not all tissue damage can be prevented, some of it can. With early treatment and good self care, people with Sickle Cell Disease can lessen the damage to their bodies (National Institute of Health, 1995; The National Association for Sickle Cell Disease, 1977).

Proper Treatment of Sickle Cell Disease

Sickle Cell Disease is a chronic disease that affects the body, not the mind. It does not affect how intelligent a person is. With the proper treatment, people with Sickle Cell Disease can live well into middle and late adulthood. Sickle Cell Disease affects different people in different ways, and no one can detect how serious the disease will be for a child. On the other hand, we do know that the following three factors can affect the child's quality of life: (a) the type of Sickle Cell Disease, (b) the kind of care a person receives, and (c) how the person and the people around him deal with the disease. Poor medical care and home care can make a chronic disease like sickle cell much more serious. For example, if a fever is not treated early, a child can become very sick. On the other hand, getting the best medical and home care can help a person live longer and better. Good medical care includes frequent visits to a doctor who has experience with Sickle Cell Disease. It can also mean getting help from other health care providers, like social workers, counselors and physical therapists. Good home care includes many things, from giving young children penicillin twice a day to having them drink a lot of fluids (Kelly, 1996; National Institute of Health, 1995).

Sickle Cell Disease affects each individual differently. While people with Sickle Cell Disease share common experiences, the way they deal with them can be very different. For example, when it comes to pain, some children are able to deal with it as if it is a part of their everyday life. Other children may have the same amount of pain, but have a tougher time handling it. People can learn to handle these experiences better, and families can react in ways that help their child. If a person with Sickle Cell Disease learns positive ways of dealing with his problems, the disease will often feel less serious (Kelly, 1996; National Institute of Health, 1995).

No one can prevent all the complications that a child with a Sickle Cell Disease will face. However, there are two things that can be done to minimize the occurrence of complications: taking care of oneself and avoiding a few activities. Taking care of oneself means that the child must rest when s/he feels tired, drink extra fluids when s/he's active and dress appropriately for the weather. Likewise, there are a few activities that can cause problems related to Sickle Cell Disease and should be avoided. These include activities that expose children to cold temperatures such as cold weather, and those activities that involve high altitudes, such as backpacking, hiking, or skiing are the kinds of activities that should be avoided.

Along with the child and parents taking the responsibility to avoid crises' situations, teachers, and care providers must be knowledgeable of the risks associated with Sickle Cell Disease. In cases where limited expertise, and or knowledge is available, children with sickle cell disease may be placed in restrictive environments and subjected to conditions or situations that precipitate crises situations. Therefore, it is necessary for educators and administrators to be apprised of risks associated with Sickle Cell Disease, and take extra precaution to avoid activities that may cause the child physical harm. The National Association for Sickle Cell Disease (1997) stated that:

> Infants and young children with Sick Cell Disease are especially vulnerable to severe bacterial infections, such as those that cause meningitis and pneumonia. Infections are the leading cause of death in children with sickle cell disease. However, early diagnosis and treatment dramatically reduce the risks of infections and the deaths that result from them. (1997, p.1)

Case Study: A School's Failure to Accommodate a Child with Sickle Cell Disease

Ahmad, a child with Sickle Cell Hemoglobin (C) Disease attended a private preschool in a rural state with an African American population of 3.7%. Upon enrollment in the preschool, the parents completed a medical form and indicated that Ahmad had Sickle Cell Disease with Alpha Thalassemia and discussed the most common symptoms that the preschool should be familiar with. At that time, the mother explained that Ahmad needed to stay indoors during cold weather. Despite the mothers attempt to educate personnel about the nature of Ahmad's disease and the repeated requests to have Ahmad stay indoors during cold weather, the preschool refused to accommodate the student. Personnel at this particular pre-school did not see a need to provide special care, or to make adjustments for Ahmad in his daily school routine.

The parent's requested that the preschool accommodate their child by not allowing him to go outdoors in temperatures below 50°. Fifty degrees or less was selected to address two of the major issues that Ahmad faces with living and managing Sickle Cell Disease. First, this temperature addresses the need to decrease the number of emergency visits to the hospital he has. Ahmad's physiological response to temperatures below 50° degrees is to get a runny nose, coughing, and a high fever (over 101°). All three of these conditions are symptoms of an infection or other complications that require immediate care by a doctor. By the time Ahmad was three, he had 35-40 emergency visits to the doctor's office or the emergency room. Because of the seriousness and complications with Sickle Cell Disease, Ahmad must endure the following procedures during each visit. Prompt administration of intravenous antibiotics to aid against pneumonia and influenza, blood and urine samples. Throat cultures were obtained if there was suspicion of meningitis. Persistent fever or deterioration would require further cultures and evaluation. At age three, Ahmad had endured 35-40 of these procedures during emergency visits.

The second major reason for selecting fifty degrees or less addresses the correlation between extreme cold weather and the onset of a painful episode. "Painful episodes in Sickle Cell Disease are believed to be caused by ischemic tissue injury resulting from obstruction f blood flow produced by sickled erythrocytes. The reduced blood flow causes regional hypoxia and acidosis, dehydration, menstruation, sleep apnea, obstructive snoring; exposure to cold may precipitate such events." (National Institutes of Health, p. 35). Because all painful episodes cannot be prevented, patients should know how to manage mild pain and should be taught to recognize symptoms suggestive of serious problems. Optimal management of patients with painful events requires adequate education of the patient, family, school, and health care providers. Conditions that expose the patient to hypoxia, dehydration, and extreme cold should be avoided. Temperatures lower than fifty degrees would constitute extreme cold weather and pose potential danger for Ahmad.

Finally, cold weather in all of us will constrict our blood vessels. However, our red blood cells are soft and pliable and can easily move through the smaller capillaries. Because people with sickle disease have sickle shaped red blood cells that are hard and sticky, constriction of the capillaries means that it makes it harder to move through the blood vessels. The hard sticky sickle red blood cells have trouble moving through small blood vessels. Constricting an already small blood vessel increases the chances that the sickle shaped cells will clog up these blood vessels so that blood cannot bring oxygen to the tissues. This can cause pain or damage to these areas. The difficulty in deciding what temperature constitutes "cold weather" that would trigger a painful episode exists because the conditions and factors contributing to a painful episode are not an exact science. On the contrary, no one, including a doctor can say with any medical certainty what temperature will trigger a crisis. Part of the difficulty in determining this is that there is no possible way to know when enough sickle shaped blood cells will stick together and clog a blood vessel. Additionally, although medically one cannot catch a cold from exposure to cold weather, Ahmad often has a runny nose and later develops a fever and sometimes a slight cough after he has been exposed to cold weather. These symptoms have taken Ahmad to the

BEST COPY AVAILABLE

emergency room on numerous occasions. Whenever Ahmad has a runny nose and a cough, the parents must call the doctor for advice; when he has a fever of 101 degrees or more he must be seen by a physician. The reason he has been in the emergency room so frequently is that when he is exposed to cold weather in the daytime, by the time night falls, when the doctor's offices are closed, he has a high fever and has to be seen immediately.

As discussed earlier, the management of this chronic illness is the number one way or component in prevention. Because of the nature of the illness, many of the specifics on the conditions triggering complications are uncertain. In this gray area of medical science, good health care management is essential to reducing the likelihood that problems would arise. The sickle cell experts do not cite a particular temperature as constituting extreme cold weather because each person's response to the weather is different. Thus, preventive measures and treatment approaches address the specific responses/concerns of the individual.

The Preschools Response to the Parents Request

The school rejected the parent's request to keep Ahmad indoors during temperatures below 50°. The preschool provided six reasons for refusing to keep Ahmad indoors: (1) Allowing Ahmad to stay indoors violates the preschool's philosophy of inclusion; (2) the preschool was not properly staffed; (3) the administration insisted that temperatures below 50° could persist for at least 5 months; therefore the request was unreasonable; (4) Physical exercise was stressed in the school's curriculum; and (5) the administration did not believe that outdoor activity in temperatures below 50° would pose a threat.

Laws and State Policy regarding Sickle Cell Disease

Ahmad attended a preschool in a state that recognizes Sickle Cell Disease as an 'Other Health Impairment'. The state's policy is as follows: Other Health Impairments

> (a) encompasses disabilities of limited strength, vitality, or alertness due to chronic or acute health problems such as heart condition, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, cancer or diabetes that adversely affect the student's educational performance.
>
> (b) requires documentation of both of the following: (1) a chronic or acute medical or health condition as diagnosed and described by a licensed physician; and(2) learning and/or behavior problems existing as a result of the medical or health condition. (West Virginia policy 2419, Regulations for the Education of Exceptional Children, 1995, p 14).

Now herein lies the irony; sickle cell is identified as "Other Health Impairments" and yet no one felt it necessary to consult with the parents or other professionals to get an understanding of the disease. In those cases where the disability is "visibly evident" children are referred for evaluation and if eligible, receive special education services. Conversely, children who suffer with sickle cell disease, asthma, and other conditions that lead to recurring bouts of sickness, unpredictable crises, prolonged absences from school may or may not receive special accommodations because individuals are not aware of specific laws, or they fail to recognize the application of disability laws regarding OHI.

Educational Rights

Since Sickle cell Disease is considered to be one of the illnesses that may qualify a student for special education services, it is important to identify those laws that protect a student's educational rights. First of all, since Ahmad was 2 years when he began preschool, one has to examine the goals and eligibility criteria under part C of the Individuals with Disabilities Education Act (1997) which mandates services for children ages 0-2. Second, one has to review Part B of the Individuals with disabilities Education Act Amendments (IDEA) to determine eligibility for 3-21 service.

Individuals with Disabilities Education Act Amendments of 1997

According to the Individual with Disabilities Education Act Amendments Part C of 1997, the goals of Early intervention programs are to:

1. enhance the development of infants and toddlers with disabilities and to minimize their potential for developmental delay;
2. reduce the educational costs to our society, including our nation's schools, by minimizing the need for special education and related services after infants and toddlers with disabilities reach school age;
3. minimize the likelihood of institutionalization of individuals with disabilities and maximize the potential for their independently living in society;
4. enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities; and
5. enhance the capacity of State and local agencies and service providers to identify, evaluate, and meet the needs of historically underrepresented populations, particularly ethnically diverse , low-income, inner-city, and rural populations.

Since Sickle Cell Disease affects each child differently, the individuals developmental and academic needs should be determined based on individualized assessments, parental input and observations, both formal and informal. Although Sickle Anemia Disease is recognized as "other health impairments," it is difficult to determine how each child will be affected. According to Part C -- Infants and Toddlers with Disabilities students eligible for 0-2 services must be experiencing developmental delays.

When assessing the child with Sickle Cell Disease we must consider whether the child is at risk of experiencing a developmental delay because of repeated bouts with sickle cell crises. Under IDEA the "At risk infant or toddler" means an individual under 3 years of age who would be at risk of experiencing a substantial developmental delay if early intervention services were not provided to the individual (IDEA, Sec. 632).

Early Intervention Services, according to section 635 of the IDEA (1997), are designed to meet the developmental needs of an infant or toddler with a disability in any one or more of the following areas: (1) physical development; (2) cognitive development; (3) communication development; (4) social or emotional development; and (5) adaptive development.

Education of All Children with Disabilities: Part B

Part B has a clear direct obligation to provide services to students with OHI. The question is what kind of services should be provided to a child with sickle cell disease, or what modifications are needed in the child's program to optimize the learning experiences.

Since sickle cell disease is classified as "Other Health Impairment," each child with sickle cell disease must be afforded the same educational consideration as other students with disabilities. In the case study presented, Ahmad was not given special consideration as a preschooler. The teacher failed to recognize sickle cell as a disability, one that would have required special accommodations in the school setting. It is also apparent that other agencies (Pediatrician, hematologist) did not foresee a need for referral. Because of this, the child's disability was not attended to by educators, and the following mandates were not executed.

According to the Individuals with Disabilities Education Act Amendments of 1997, the following should have occurred.

1. Child Find - According to Section 612 of IDEA (1997), all children with disabilities residing in the State, including children with disabilities attending private schools, regardless of the severity of their disabilities, and who are in need of special education and related services, are identified, located, and evaluated and a practical method is developed and implemented to determine which children with disabilities are currently receiving needed special education and related services.

This requirement also pertains to those children who are enrolled in private, including parochial, elementary and secondary schools.

2. Least Restrictive Environment-Section 612 (5) B states that to the maximum extent appropriate, children with disabilities, including those in public/private institutions, are educated with non-disabled children, and that removal from the regular education environment only occurs when education in that setting, with supplementary aids and services, cannot be achieved satisfactorily.

3. Eligibility Determination - A STATE educational agency, other State agency, or local educational agency shall conduct a full and individual initial evaluation before the initial provision of special education and related services to a child with a disability.

The purpose is to (a) determine whether a child has any one following disabilities: with mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance (hereinafter referred to as "emotional disturbance"), orthopedic impairments, autism, traumatic brain injury, other health impairments, or special learning disabilities; and, who by reason thereof, needs special education and related services (IDEA, 1997) and (b) determine if a child is experiencing developmental delays, as defined by the State and as measured by appropriate diagnostic instruments and procedures, in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development; and who, by reason thereof, needs special education and related services.

If that student is eligible for special education services, there is a clear determination that the OHI adversely affects educational performance, and an individualized education program (IEP) is written for that child.

4. Individualized Education Program- Section 614 requires that all students eligible for special education services have an IEP. The is a written statement for each child with a disability that is developed, reviewed, and includes:

1.a statement of the child's present levels of educational performance, including: how the child's disability affects the child's involvement and progress in the general curriculum; or for preschool children, as appropriate, how the disability affects the child's participation in appropriate activities;

2. a statement of measurable annual goals, including benchmarks or short-term objectives, related to (a) meeting the child's needs that result from the child's disability to enable the child to be involved in and progress in the general curriculum; and (b) meeting each of the child's other educational needs that result from the child's disability;

3. a statement of the special education and related services and supplementary aids and services to be provided to the child, or on behalf of the child, and a statement of the program modifications or supports for school personnel that will be provided for the child (a) to advance appropriately toward attaining the annual goals; and (b) to be involved and progress in the general curriculum and to participate in extracurricular and other nonacademic activities; and (c) to be educated and participate with other children with disabilities and nondisabled children in the activities described in this paragraph;

4. an explanation of the extent, if any, to which the child will not participate with nondisabled children in the regular class and in the activities.

5. a statement of any individual modifications in the administration of State or district wide assessments of student achievement that are needed in order for the child to participate in such assessment; and

6. the projected date for the beginning of the services and modifications, and the anticipated frequency, location, and duration of those services and modifications;

7. a statement of the transition service needs of the child beginning at age 14, and updated annually under the applicable components of the child's IEP that focuses on the child's courses of study (such as participation in advanced-placement courses or a vocational education program);

8. a statement of (a) how the child's progress toward the annual goals will be measured; and (b) how the child's parents will be regularly informed (by such means as periodic report cards), at least as often as parents are informed of their nondisabled children's progress.

There may be situations when a student with OHI does not meet eligibility requirements set out by state and federal law at the time of assessment. However, in the case of an OHI, it seems reasonable at this point to address the need for modifications in the curriculum, physical environment to prevent crisis, particularly for the child with OHI. Also, due to the progressive nature of sickle cell disease it is essential that these children be reevaluated intermittently to determine eligibility status in the future.

Placement

Section 615 of the Individuals with Disabilities Act (1997) require that procedures are in place to ensure that children with disabilities and their parents are guaranteed procedural safeguards. These safeguards are to insure a free appropriate public education by such agencies.

1. Parents have the right to examine all records that relate to the identification, evaluation and educational placement of the child.
2. The State Education Agency has the right to identify a surrogate for the parents.
3. Parents will receive written prior notice in the event of an agency proposing to initiate changes in a program or refuse to initiate or change program.
4. Written notice shall be provided in the parent's native language.
5. Parties involved are afforded an opportunity for mediation through an impartial hearing.
6. Individuals may present complaints related to the identification, evaluation, or educational placement of the child, or the provision of a free appropriate public education to such a child.

Implications for Educators

Educators must be educated about Other Health Impairments so that they can make informed decisions about the needed accommodations. It is necessary for teachers to know:

1. the physical limitations of health impairments such as heart conditions, rheumatic fever, nephritis, asthma, sickle cell, anemia, hemophilia, epilepsy, lead poisoning, cancer or diabetes.
2. teachers need to understand how the impairment may affect the student's educational performance.
3. teachers need to communicate with parents to better understand the students physical limitations.
4. recognize the parent as the expert on all matters related to the child's health.
5. teachers need to make appropriate modifications regarding the child's learning and/or physical environment.

Implications for Administration

1. afford families with children with other health impairments due process under the law.
2. allow for frequent student assessments to evaluate the students academic and social progress.
3. coordinate, search and find procedures with social agencies, health care providers and educators.

Children who suffer from chronic illnesses must be given due consideration when it comes to modifying the educational program or altering the environment. The fact that some illnesses aren't as visible as others does not preclude due process under the law. Disability laws are enacted to protect the rights of children and adults with disabilities.

BEST COPY AVAILABLE

References

Hardman, M.L., Drew, C.J., Egan, M.W., & Wolf, B (1990), Human Exceptionality, Allyn & Bacon, Needham Heights, Mass.

Haslam, Robert, Valletutti, P., Medical Problems in the Classroom: The Teacher's Role in Diagnosis and Management, 3rd Edition (1996), Pro.Ed. Austin, TX.

Individuals with Disabilities Education Act Amendments of 1997, Pub. L. No. 101-476, (20. U.S.C. 1400 et seq).

National Association for Sickle Cell Disease, Inc., (1997) What is sickle cell disease. 3345 Wilshire Blvd., Suite 1106 Los Angeles, CA 90010-1880

National Institute of Health (NIH) (1995) Management and Therapy of Sickle Cell Disease Rep. No. 95-2117), Bethesda, MD. National Institute of Health, National Heart, Lung, and Blood Institute.

Underwood, J.K., Mead, J.F., (1995), Legal Aspects of Special Education & Pupil Services, Allyn & Bacon, Needham Heights, Mass.

West Virginia Department of Education, (1995), Regulations for the Education of Exceptional Students. Policy 2419.

Belva C. Collins, Ed.D.
Jennifer Grisham-Brown, Ed.D.
John W. Schuster, Ed.D.
University of Kentucky
Lexington, KY 40506-0001

TRAINING RURAL TEACHERS AS RESEARCHERS: GUIDELINES FOR CONDUCTING FIELD-BASED RESEARCH IN THE RURAL CLASSROOM

Special educators often may find themselves isolated within the school setting, particularly if they work in the area of low incidence disabilities. This problem may be exacerbated for a teacher in a rural region who may be the lone person, or one of few persons, in the entire district who is trained in the low incidence area (Helge, 1981). Since its inception in 1984, the Developmental and Behavioral Disorders (DBD) program at the University of Kentucky (Schuster, Collins, Nelson, Gast, & Wolery, 1991), a graduate program that focuses on Moderate/Severe Disabilities (MSD) and Early Childhood Special Education (ECSE) has trained over 100 teachers. Since the vast majority of these teachers have returned to rural regions, the program has developed three major objectives to enable graduates to best meet the needs of the school districts in which they work. These include preparing graduate level personnel to (a) work in diverse settings with persons who exhibit developmental and behavioral disorders, (b) provide consultation, inservice training, and information dissemination related to serving persons with developmental and behavioral disorders, and (c) analyze and conduct applied research with persons who exhibit developmental and behavioral disorders.

In addition to the on-campus program, the Department of Special Education and Rehabilitation Counseling (EDSRC) has extended the outreach of the DBD program by offering distance learning classes through the Training Rural Educators in Kentucky (TREK) projects (Collins, in press; Collins, Hemmeter, Schuster, & Stevens, 1996; Schuster et al., 1991). The TREK programs have enabled rural special education teachers and related service delivery personnel (e.g., speech/language pathologists) to come together in small groups in rural communities to complete degree, certification, and/or teaching advancement coursework through distance learning technology (i.e., satellite, compressed video).

Whether students are enrolled in an on-campus or off-campus master's program, they complete a minimum of 36 hours of graduate coursework that includes a minimum of 9 hours of practica, 3 hours of thesis research, and 6 hours of elective coursework (selected from courses offered outside of the EDSRC). Regardless of whether a student is completing a master's degree, an advancement in teaching rank, and/or certification, all students must complete a series of courses that are driven by a philosophy in applied behavior analysis.

Specifically, the DBD program has developed a series of three courses that teach research and related skills to teachers. First, students must complete an advanced course in applied behavior analysis (ABA) in which students learn basic principles and theory of ABA and specific applications to social behavior. (An introductory course in ABA is offered which covers basic principles and theory for both social and academic behavior; however, the course is not required at the graduate level). This course uses a textbook, approximately 40 research-based journal articles, and other media (e.g., film). It also involves an Internet component to address social behavior issues. Students must write a behavior reduction program (within the paradigm of an experimental design) and abstract related research articles from the professional literature. Research skills targeted in this course for students to acquire include selecting and measuring dependent variables, identifying and developing independent variables, selecting and identifying some basic experimental designs, and measuring dependent variable reliability data.

Second, students must complete a course in ABA which focuses on instructional methodology. In this course, a textbook and over 60 data-based research articles, as well as other teaching tools, provide the framework for students to write and implement a data-based classroom project which increases targeted academic behaviors. Additionally, students must develop and write instructional plans. Students must use one of the many instructional strategies learned in the course for the implementation of the academic change project and must write instructional plans which cover four other instructional strategies. Some of the research skills addressed in this class include operationalizing various response prompting strategies as independent variables, learning additional experimental designs, and measuring independent variable reliability data.

Finally, students must complete an ABA course in single subject research designs. During this course, students use research-based articles (no textbook is required) to learn about the 14 single subject research designs and other research-related skills (e.g., how to review manuscripts for a professional journal). In addition, students may use The Single Subject Research Advisor (SSRA) (Blackhurst, Schuster, Ault, & Doyle, 1996) as a learning tool. The SSRA is a computer expert system which addresses all single subject research designs and delineates how to collect data on dependent measures. Additionally, the SSRA contains a data base of over 500 studies that have used single subject research designs. As a requirement of this class, students must develop and write a research proposal that uses a single subject research design. The proposal must include a review of the literature, specific research questions, a rationale for the proposed study, a completed methods section, and a section which outlines how the results will be analyzed. Many students use this proposal as a basis for their subsequent theses.

As a result of this series of courses and the subsequent thesis completion, the DBD program has a history of student research conducted in the rural classroom that meets the stringent guidelines for publication in the professional literature. (A list is available from the authors on request.) DBD students have published studies that they conducted as class projects during coursework, as independent studies to meet the thesis requirement, and as personal teaching projects following degree completion. As a result of their research, teachers provide their students with state of the art programming while answering questions about how best to deliver instruction and change behavior. Some of the questions investigated by rural teachers have involved finding ways to facilitate generalization when community-based instructional opportunities are limited, how to select instructional materials that reflect a rural setting, and how to facilitate interactions between students with and without disabilities when rural attitudes are a barrier.

The purpose of this paper is to describe (a) a research-based DBD course in special education instructional methods that is delivered to rural teachers both on-campus and through distance learning technology, (b) how the thesis requirement has been used to document effective practices in rural settings, and (c) the ongoing research relationship that EDSRC faculty have developed with graduates of the program who are employed in rural settings. In addition, the paper briefly will discuss issues relating to conducting research in rural areas.

Facilitating Rural Research Through Graduate Coursework

Students in the TREK-DL project work toward one of two Masters degrees in either ECSE or MSD. Regardless of the major area of study, all students are required to take Methods for Teaching Students with Disabilities. This course is an advanced ABA course that focuses on instructional issues and methodologies for learners with a variety of disabilities. The course is designed to teach students various instructional procedures (e.g., constant time delay, system of least prompts, simultaneous prompting) that have proven effective for teaching learners with disabilities. In addition, students learn about other aspects of instruction including group instruction, instructive feedback, embedded skill instruction, and observational learning. The approach for teaching these procedures and related concepts involves textbook readings (Wolery, Ault, & Doyle, 1992), research articles, lecture, and role play in the classroom. A cumulative

BEST COPY AVAILABLE

project that assesses the students' knowledge and skills related to instructional program planning is required of all students.

The instructional program is designed to provide students with an opportunity to utilize the skills learned in the course in their own classroom and to begin thinking about potential thesis topics (i.e., use of a particular procedure). An initial requirement of the assignment is that students meet with the professor to discuss what they want to teach and with what procedure. Students may elect to teach any skill that is functional for the age and ability levels of their students. Likewise, they may use any of the instructional procedures they learned in class to teach the skills. Students must select a research design and follow the requirements for its use (e.g., if they use a multiple probe design, they must collect periodic probe data). After the initial conference, students begin collecting data for their project. Once baseline data are collected, the students conference once again with the instructor. In the case of students who live in rural areas, the instructor requests a graph of the data via fax or mail and then conferences with the student on the telephone to assure that stable baseline data have been achieved. Students then implement intervention. A third conference is held with each student when their target student(s) reach criterion on the target skills. Once again, the instructor requests graphed data to assist students in interpreting and analyzing the results. After instruction is completed, students must write a paper describing their project and submit if for a grade. The areas that must be covered in the project write-up include (a) student description, (b) instructional objectives, (c) rationale, (d) prerequisite skills, (e) precautions for implementation, (f) instructional setting, (g) general procedures, (h) materials and equipment, (i) data collection procedures, (j) data recording sheets, (k) screening procedures, (l) baseline procedures, (m) instructional procedures, (n) maintenance and generalization procedures, (o) reliability, (p) experimental design, and (q) data summary.

The benefit of this project on student learning is immeasurable. It is not uncommon to hear students say that they realize they "were not really teaching" until they implemented their instructional program. One such student, Lana Mullins, is a teacher in a rural school district in eastern Kentucky who teaches students with a range of abilities, including those with learning disabilities as well as mild mental disabilities. She was concerned about the range of abilities in her classroom and how she could meet the needs of all of the students. As a result, she decided to develop her project around teaching a group of learners, each of whom was learning a different skill. She selected the antecedent prompt and test procedure to teach three students. One student was taught survival signs, a second Dolch words, and a third multiplication facts. In addition, Lana collected data on the degree with which students learned each other's targeted information by observing the instruction of others in the group. A multiple probe across skills design replicated across three students with mild mental disabilities showed that the target students met criterion on the target tasks. As well, all students learned non-targeted information that was not taught directly to them. Although there were some design flaws with her study, instructor feedback will assist her in developing her thesis. The teacher was ecstatic with the results of the program. She reported benefits beyond skill acquisition that included (a) students' enthusiasm about learning in this manner, (b) valuable use of teacher time, (c) reduction in her anxiety about completing a thesis, and (d) other teachers in the school interested in learning about the procedures.

Facilitating Rural Research Through a Thesis Requirement

The conceptual framework behind the thesis requirement rests on the belief that teachers, who may find themselves geographically and emotionally isolated and lacking access to resources (e.g., university professors, special education libraries, trained consultants), should have the research skills to independently problem solve in their classrooms. In other words, teachers need the skills to (a) objectively analyze the classroom environment and the behaviors of the target student, (b) generate hypotheses for increasing or decreasing target behaviors based on a professional research base, (c) systematically and consistently implement behavioral and instructional programming, (d) make modifications in programming based on student data, and (e) defend or discard classroom practices based on the results of student data.

Based on the required coursework leading up to the thesis requirement, students rarely encounter methodological problems when completing their thesis. This is evident by the fact that over 80% of all DBD student theses are accepted for publication in refereed journals. However, logistical problems are often evident when trying to teach and/or conduct research in rural areas. When trying to provide state-of-the-art teaching in rural areas, many specific logistical concerns arise. Some of these logistical problems include (a) the high costs of providing transportation from isolated areas where schools are located to appropriate community-based instructional sites, and (b) the necessity (due to transportation costs and distance), but difficulty, in providing effective simulated instruction for natural community settings.

One DBD-TREK student, Rachel Branham, who worked in a rural, isolated setting was confronted with these same problems when teaching her secondary students with moderate mental retardation. Her students needed to acquire functional, community-based skills such as street crossing, cashing a check, and mailing a letter. However, logistical transportation problems prevented her from accessing the community on a frequent basis to ensure that general case programming could be used to encourage generalization to the distant and multiple sites encountered by her students within their home communities. Therefore, based on (a) her experiences in this rural area, (b) the research literature on in-vivo and simulated instruction and its effects on generalization, and (c) the potential effectiveness for video instruction, Rachel proposed a study for her thesis which would not only provide information for her specific setting but also would add to the research literature.

Rachel proposed a study which compared three instructional packages. These packages included (a) classroom simulation with community-based instruction, (b) videotape modeling with community-based instruction, and (c) classroom simulation with videotape modeling and community-based instruction. She used these three formats to teach secondary-aged students with moderate mental disabilities to cross the street, cash a check, and mail a letter. The three strategies were counterbalanced across students and tasks. She used a constant time delay procedure to teach all three skills within a multiple probe across skills design which was replicated across the three students. Rachel also assessed generalization to novel community settings.

Classroom simulation occurred within her own high school classroom and the hallway outside of her classroom. Peer tutors served in the role of the bank teller and acted as cars when crossing the street was taught. Videotape modeling included a videotape of a peer completing the task analysis for each targeted skill. Community-based instruction occurred in the community site closest to the school where students would mail letters and cash checks for members of the school staff. The effectiveness data indicated that all students learned each skill regardless of which instructional format was used for delivery. In addition, all students generalized the skills to novel community settings regardless of the instructional format. However, efficiency data indicated the combination of classroom simulation and community-based instruction was the most efficient strategy across all participants in terms of instructional time to criterion. The strength of this particular study is that it shows that instruction can result in generalization even when community-based instruction cannot be conducted on a daily basis and that videotape modeling can be as effective an adjunct to community-based instruction as classroom simulation. The strength of this study as a thesis is that it allows a student to acquire and use research skills while answering questions specific to a particular student and site while contributing to the research literature (Branham, Collins, Schuster, & Kleinert, in press).

Facilitating Rural Research Through Post-Graduation Relationships

Special education teachers who have completed a stringent personnel preparation program temporarily may find that they are relieved to be finished with degree requirements and anxious to focus on instruction in their classrooms. However, those who have been trained in a program with a strong behavioral approach that emphasized data-based instruction will soon find that the line between instruction and research can be so fine as to be non-existent. A strong foundation in ABA requires that a teacher continue to analyze the behaviors of all students, search for the best means of increasing desired behaviors, and make data-based program decisions and modifications that will be beneficial to the students. In addition, the federal law requires that special education teachers develop individual student goals and objectives and document progress in meeting them. This need for the continued use of research skills is conducive to developing a continuing research relationship between faculty and graduates who find employment in special education classrooms. In particular, the continued research relationship is advantageous to rural teachers who may find themselves isolated from those who are supportive of their efforts to problem solve and try novel practices within their classrooms.

Hemmeter, Doyle, Collins, and Ault (1996) have developed a checklist for conducting field-based research based on their experience working with special education teachers in the field. The checklist contains 31 steps to complete when conducting field-based research. Steps in getting started include (a) identifying the research question, (b) selecting the research design, (c) defining the roles of the participants, (d) obtaining permissions, (e) selecting target students, (f) developing and obtaining materials, and (g) setting a starting date. Steps in implementation include (a) scheduling reliability observations, (b) updating materials, (c) summarizing data, and (d) providing feedback to participants. Steps in completing the research project include (a) providing a final data summary and (b) conducting a follow-up with parents and the administration. Those who are considering conducting field-based research may wish to refer to these guidelines and the suggestions for implementing each step.

An EDSRC faculty member implemented the steps suggested by Hemmeter et al. (1996) in conducting a research study with, Meada Hall, a graduate of the DBD program was employed in a rural setting (Collins, Hall, & Branson, 1997). In this study, the roles of those involved in the collaborative research relationship were defined in the following manner. First, the EDSRC faculty member designed the study in collaboration with Meada and an English teacher in the same school. Each member of the group benefited from the study in that the faculty member was able to answer a research question in special education instructional design, the special education teacher was able to design and document instruction in recreational skills for her class of students with functional mental disabilities, and the English teacher was able to provide the students in her advanced composition class with a hands-on inclusive experience that served as the basis for assigned written pieces. Second, each member of the team performed specific tasks during the study. The special education teacher identified appropriate recreational skills for instruction, conducted daily instructional sessions, and recorded and graphed student data; the faculty member collected reliability data, suggested modifications, and wrote about the project for publication; and the English teacher provided peers from her class for weekly generalization sessions, collected data on the validity of the recreational skills targeted for instruction, and collected written data that documented changes in attitudes in the students without disabilities toward the students with disabilities.

Specifically, the Collins et al. (1997) study questioned the effectiveness of a system of least (SLP) prompts procedure to teach recreational skills to students with functional mental disabilities (FMD) who attended a rural secondary school. The target skills (i.e., playing a computer game, selecting and watching a television program, watching a sports videotape, and playing a card game) were derived from a local survey and reflected those in which student peers without disabilities in the rural community most often participated. The special education teacher selected

BEST COPY AVAILABLE

the SLP procedure based on previous classroom data that showed the procedure to be effective in teaching chained tasks. On Friday of each week, peers without disabilities from the advanced composition class participated in the target skills with the students with disabilities. A multiple probe across skills design replicated across four students with FMD showed that the target students met criterion on the target tasks and showed an increase in the generalized ability to perform those skills with peers without disabilities. The peers without disabilities wrote pre- and post-intervention reactions regarding their attitudes toward the students in the FMD class. An analysis of those reaction papers showed that attitudes changed from being largely ambivalent (e.g., don't know or care about the students with disabilities) to positive (e.g., students with disabilities thought of as friends and having value as a fellow human being). In summary, the project was considered a success. The special education teacher came into the study with the skills to successfully conduct a research project, having previously completed our graduate program and a thesis that resulted in publication (Hall, Schuster, Wolery, Gast, & Doyle, 1992). The continued research relationship with the faculty member gave the special education teacher the support to try something novel (e.g., collaborating with the English teacher) and to gain recognition in her rural school district through a resulting professional publication and presentations (i.e., university symposium, state conference).

Summary of Practical Applications and Issues Involved in Rural Research

The ability to conduct field-based research appears to be a valuable tool for special education teachers. This may be particularly true for rural teachers who may find that they are isolated from universities or consultants who could keep them abreast of current best practices. However, based on our experience, several issues should be considered in conducting research within a rural area.

The rural researcher needs to be flexible in designing a research project, taking geographic challenges into consideration. First, the geography may drive the research question (e.g., how to conduct effective simulations when frequent CBI is not possible). Second, subject selection can involve heterogeneous groups of students when a homogenous subject pool is small. For example, the subjects can include students with mild to severe disabilities instead of a group of students with severe disabilities only. Third, there may be a limited number of training settings for a study that involves generalization. In addition, transportation may further limit access to those settings. Fourth, instruction may be compromised by a greater likelihood of student absence due to such variables as schools being closed for extended periods due to inclimate weather and district-wide illness. Also, instruction may impeded by nonsupportive school personnel who do not value field-based research. Fifth, rural researchers may have difficulty finding reliability data collectors who are familiar with the instructional procedures and the data collection system used by the field-based researcher. For example, extra time may have to be set aside to train classroom assistants to collect reliability data prior to beginning the study. Sixth, geography also may affect the design of a research project. For example, a project may need to use a multiple probe design in place of a multiple baseline design when it is impossible to collect continuous baseline data in a setting or with a student. Finally, it may be difficult for the classroom teacher to communicate with others (e.g., university personnel) who can assist in data analysis and the identification of modifications. However, fax machines can be used to transmit data for frequent analysis, and problems that arise can be discussed over the telephone or, if the technology is available, through interactions via compressed video (i.e., two visual and auditory television transmission).

Although there are challenges, there also are advantages to conducting research in the rural setting that may not be in the urban setting. First, valid training sites that reflect family preferences (e.g., restaurants, pharmacies, banks, grocery stores) may be easier to identify since numbers may be limited in a small community. This may simplify the generalization plan. Second, students going to community sites may be recognized by community members, thus facilitating the opportunity for naturalistic instruction in social skills. Third, the rural teacher is more likely to personally know community members, increasing the ease in such variables as gaining access to training sites and obtaining necessary permission from parents and administration. Fourth, classroom teachers, administrators, and district personnel often like the publicity generated by the publication of research in professional journals. Fifth, a researcher selecting target skills for research will more likely be able to identify target skills common across all students in the class. Finally, once a rural teacher develops research skills, that person has the skills to share expertise with other personnel in the region.

Based on our experiences, we encourage training programs to focus on the development of research skills when training rural teachers. The ability to be a data-based problem solver in the classroom may be one way of effectively countering the burn-out so often described in rural special education settings. In addition, the ability to share effective practices in rural settings through professional research and subsequent publication and presentation is a valuable way to contribute to the field of special education.

References

Blackhurst, A. E., Schuster, J. W., Ault, M. J., & Doyle, P. M. (1996). Single subject research advisor [Computer software]. Lexington, KY: University of Kentucky.

Branham, R., Collins, B. C., Schuster, J. W., & Kleinert, H. (in press). Effects of community-based instruction , classroom simulation training, and videotape modeling on teaching chained community skills to students with functional mental disabilities. Education and Training in Mental Retardation and Developmental Disabilities.

Collins, B. C. (in press). Training rural educators in Kentucky through distance learning: A model with follow-up data. Teacher Education and Special Education, 20.

Collins, B. C., Hall, M., & Branson, T. A. (1997). Facilitating inclusion of students with moderate to severe disabilities by involving peers in the instruction of leisure skills. Exceptional Children, 63, 499-512.

Collins, B. C., Hemmeter, M. L., Schuster, J. W., & Stevens, K. B. (1996). Using team teaching to deliver coursework via distance learning technology. Teacher Education and Special Education, 19, 44-54.

Hall, M. G., Schuster, J. W., Wolery, M., Gast, D. L., & Doyle, P. M. (1992). Teaching chained skills in a non-school setting using a divided half instructional format. Journal of Behavioral Education, 2, 257-279.

Helge, D. (1981). Problems in implementing comprehensive special education programming in rural areas. Exceptional Children, 47, 514-520.

Hemmeter, M. L., Doyle, P. M., Collins, B. C., & Ault, M. J. (1996). Checklist for successful implementation of field-based research. Teacher Education and Special Education, 19, 342-354.

Schuster, J. W., Collins, B. Nelson, C. M., Gast, D. L., & Wolery, M. (1991). The University of Kentucky program in developmental and behavioral disorders. Education and Treatment of Children, 14, 333-348.

Wolery, M., Ault, M. J., & Doyle, P.M. (1992). Teaching students with moderate to severe disabilities: Use of response prompting strategies. White Plains, NY: Longman.

Nancy Harriman, Ph.D.
University of Southern Maine
Gorham, Maine

Mary Schmidt, Ph.D.
East Carolina University
Greenville, North Carolina

Sherry Estabrook
University of Southern Maine
Gorham, Maine

COOPERATIVE TEACHING AND COOPERATIVE LEARNING: THE KEY TO SUCCESSFUL COLLABORATION IN RURAL CLASSROOMS

One of the most challenging aspects of inclusion for teachers is thinking of their work collectively, rather than individually. To say *teaching in an inclusive school is a collaborative endeavor* is easy. However, to actually share the responsibility for decision making about what, when, and how to teach can be very difficult (Schumm & Vaughn, 1995). Cooperative teaching often entails not only sharing responsibility for facilitating the learning of individual students, but also entails sharing two other personal assets, time and space. Cooperatively designing and staffing a learning environment that meets the diverse needs of learners requires shared goals, careful planning, sensitive communication, and sustained effort (Schmidt & Harriman, in press). When these factors are observed, cooperative learning opportunities are enhanced for the teachers as well as students involved.

However, cooperative teaching can occur in many configurations. Teachers may "team teach" by exchanging groups of students throughout the day or week. Or, teachers may collaboratively plan for the same group of students but then deliver instruction independently. One of the most challenging, yet potentially powerful forms of cooperative teaching is coteaching.

Definitions of Coteaching

According to Cook and Friend (1995) cooperative teaching, or coteaching, occurs "when two or more professionals jointly deliver substantive instruction to a diverse, or blended, group of students in a single physical space." (p.1) Two aspects of this definition are noteworthy, "substantive instruction" and "in a single physical space." The mere presence of additional adults in a general education classroom, regardless of their titles, does not constitute coteaching. For example, a personal assistant accompanying a student with intensive special needs who works one to one with the student in the back of the classroom with little to no interaction with the rest of the class or teacher is not coteaching. Nor is a special educator whose sole role is to observe the teacher teach and occasionally assist students with special needs.

Coteaching requires a "substantive" level of coplanning, coinstructing, and collaborative decision-making. The conditions for coteaching are not met if two teachers plan instruction together, but choose to deliver it independently in separate classrooms (the general education classroom and the resource room). In this case the two professionals may be collaborating and coordinating instruction (sometimes referred to as "teaming"), but they are not coteaching.

What does coteaching look like? Friend and Cook (1996) describe five configurations: a) classic coteaching (referred to by Friend and Cook as team teaching), b) one teach, one support, c) station teaching, d) parallel teaching, and e) alternative teaching. In the classic coteaching configuration teachers equitably share the leadership role for instructional activities. In the one teach, one support configuration one teacher takes the leading role while the other assists. In the station teaching configuration segments of the curriculum are taught simultaneously by each teacher at different centers. In the parallel teaching configuration the teachers divide a heterogeneous class into two groups; then each teacher teaches the same content to a group. Finally, in the alternative teaching configuration the class is divided into groups for pre-teaching, remediation, or enrichment; each teacher teaches a different group.

Each configuration implies certain roles for each teacher. Identifying the best configuration for a specific classroom situation is the first step. Then, teaching strategies (e.g. cooperative learning, inquiry-based science activities) appropriate for the coteaching approach and students involved must be selected.

Rural Focus

As discussed in our session last year, inclusive teaching is not a new concept to many rural schools, who may have a heritage of "including" a diverse range of students in their community school classrooms. However, the current curricular demands and implementation of new learning standards for all students may require new types of collaboration among special educators, classroom teachers, and other personnel in rural schools. Furthermore, previous research on coteaching has not focused on rural schools. Through a survey and interviews the authors are seeking to learn: a) the extent to which the configurations of coteaching described by Cook and Friend (1995) are in practice in rural schools, b) what strategies educators in rural schools find to be most effective in implementing coteaching, c) the impact of coteaching on student learning, and d) whether educators see any relationship between the nature of students' abilities/disabilities and the success of various cooperative teaching strategies.

Method

Using Friend and Cook's five configurations as a reference for teachers, we surveyed and interviewed teachers about their coteaching practices, including the instructional strategies they found to be of most value in implementing cooperative teaching. A 22 question survey was distributed to 387 special educators in rural schools in Maine and to over 500 special educators in rural schools in North Carolina. (The survey appears in Appendix A.) The criteria used for identifying a school as rural was a community of 2500 residents or less, outside a metropolitan area (Office of School Services). Due to the large number of classroom teachers who would not find the survey appropriate, because they do not participate in coteaching, we chose to assess classroom teachers' perspectives of coteaching through interviews. In addition, a dozen coteaching partners (a special educator and a classroom teacher) nominated by university supervisors, principals, or special education directors as highly effective coteachers in rural schools were interviewed individually.

Preliminary Results

The interview questions appear in Appendix A. Surveys and interviews took place during winter and spring, 1998. The preliminary results reported here were based on results of interviews with general and special educators.

Configurations of Coteaching

Among the interviewees, a wide range of configurations were used; furthermore, they provided a strong rationale for their choices. For example, one team justified the use of the one teach, one support configuration on the basis of the severity of the disabilities of the students. Some teams tended to rely on familiar configurations (i.e., one teach, one support) while other teams utilized a variety of approaches to meet the needs of their students. Creative methods of implementing the models, such as four teachers coplanning four lessons for four days, were also offered.

Instructional Strategies

The prevailing theme for choosing instructional strategies in the representative sample was to "use whatever worked." They utilized a wide variety of strategies, including: cooperative learning groups, hands-on activities, student-facilitated small groups, teacher-facilitated small groups, experiential learning, notebooks to contribute to portfolios, and, of course, direct instruction with assistance from special education staff.

Impact of Coteaching on Student Learning

Both classroom teachers and special educators perceived that many student benefits were derived from these strategies. The benefits to students' social development included: resolving conflicts, turn-taking, sharing, practicing tolerance for individual differences, understanding the needs of others, making choices and developing responsibility. Teachers perceived all of these as contributing to students' participation in a democratic community.

Teachers also perceived benefits to students' cognitive development. At the secondary level, a big advantage to the students was having a teacher who was a content area expert and the experience of lessons in a real lab. Other benefits were: developing study skills, punctuality, preparedness, problem-solving abilities, cooperative learning behaviors, knowledge and application of the knowledge, i.e., measuring, interpreting visuals. Overall, both the general and the special educators believed the benefits of coteaching far out-weighed the detriments. A detriment noted by one team at the middle level was "the staggering range of abilities". They felt one result of this was that some higher achievers were "asked to do more on their own."

Suggestions for Coteaching in Inclusive Classrooms

While all the teachers interviewed were very positive about their coteaching experiences, many noted that "the match" was critical to their success. There philosophies had to align, although as one team noted, there were some areas where we had to "agree to disagree". Other essentials that were noteworthy: a sense of humor, flexibility, letting go of ownership of their classrooms, being open to new ideas, ongoing communication, administrative support, common planning times, and a "true relationship of mutual respect."

Several very experienced coteaching teams emphasized the importance of advocacy and student placement. They strongly felt that some students, a very small percentage, maybe one to two percent, did not benefit from an inclusive placement. Two areas of disability that were mentioned in this respect were distractibility and problem behavior. These coteaching teams also mentioned the importance of maintaining a balance of students with different learning and behavioral strengths and needs. They emphasized the need to advocate for a balanced mix of students, considering attributes such as male/female, worker/leader, reading level, independent/dependent, as well as the extent/types of accommodations needed for disabilities. Pre-planning can help, but as situations arise, administrators may be under pressure to place additional students and increase class size of cotaught classes.

Implications

While it is premature to draw conclusions, it does appear that among effective coteaching teams, coteaching is perceived to have significant benefits for students, particularly those with disabilities. Classroom teachers and special educators felt coteaching was mutually beneficial for them and their students under the right conditions. Conditions mentioned included, open communication, a good match between coteachers, and a sense of humor. Flexibility and a willingness to take risks also appeared to contribute significantly to successful coteaching partnerships.

configurations and strategies to successfully teach students with diverse abilities. Administrative support and professional development for teachers to further refine and disseminate the knowledge they have aquired to colleagues is likely needed.

References

Cook, L. & Friend, L. (1995). Co-teaching guidelines for effecting creative practices. Focus on Exceptional Children, 28(3), 1-12.

Office of School Services. Legislators' School for Youth Leadership Development. Greenville, NC: East Carolina University.

Friend, M. & Cook, L. (1996). Interactions: Collaboration skills for school professionals, 2nd Ed. White Plains, NY: Longman.

Schmidt, M. & Harriman, N. (in press). Teaching strategies for inclusive schools. Fort Worth, TX: Harcourt Brace.

Schumm, J. & Vaughn, S. (1995). Getting ready for inclusion: Is the stage set? Learning Disabilities Research and Practice 10(3), 169-179

Appendix A
Interview Questions for Coteaching Study

1. Explain your responses to the items on the survey about different configurations for coteaching.

2. What instructional strategies are most helpful in implementing coteaching?

3. How do you and your coteacher determine which strategies to use?

4. When you and your coteacher plan lessons, how much time is spent in collaborative decision making? Do you feel your input is significantly valued by your coteacher? What are some examples that demonstrate this?

5. What are some ways you resolve conflicts with your coteacher?

6. Describe one change you would make in your clasroom to improve the effectiveness of coteaching.

7. What are some ways that cooperative learning impacts cooperative teaching?

8. How do students perceive your role as a coteacher?

9. What are some benefits and/or detriments to students who have disabilities?

10. What are some of the benefits and/or detriments to students in the cotaught class who do not have disabilities?

11. What are some parent responses to coteaching, including parents of students who are low, average, or high achievers?

12. What advice would you give others about coteaching?

13. Anything else you would like to add about coteaching?

Diane T. Woodrum, Ed.D., Professor
Educational Theory & Practice/
Special Education
West Virginia University
608-G Allen Hall
West Virginia University
Morgantown, WV 26506-6122

Revisiting ADHD Inservice Training for Rural Educators

The United States has done something that no other nation has even attempted. It provides universal enrollment of all children in schools while seeking the dual goals of excellence and equity in education. The U.S. embraces the concept of a Free Appropriate Public Education for all children. This is being done regardless of creed, national origin, race, or disability. "Schools increasingly enroll all children, and the 'all' is becoming increasingly diverse." (Yesseldyke et al, 1997)

Many have come to believe that inclusion offers the opportunity to change the process of child learning and allow for parents, teachers, school psychologists, administrators, and the community to study program effectiveness and to alter those program components that may not benefit all children. It has been and will continue to be impossible to imagine all of the potential problems that can and will arise as we develop inclusive schools. We now know that attitudes will have to be changed, and the key stakeholders must become committed to the concept of inclusive schooling.

Inclusion should not be viewed as a classroom, school, or district system. Many believe that inclusion is actually social justice. If this is true, and social justice is the key issue, then educational reform must include all children and all schools. Over the next few years there will be a continued refinement of the understanding of the change process and how best to bring meaningful reform to the majority of American schools. Inclusion will continue to be the most used word as we enter the new century.

Much, but not all, of the controversies surrounding the reality of Attention Deficit Hyperactive Disorders has quieted down. What continues to exist in light of the expanding inclusive schooling movement, is the regular classroom teacher's concern about actually meeting the needs of an AD/HD student in a regular class even with the use of supportive services, teaching adaptations, and curriculum modifications.

Many teachers, especially teachers who teach in rural areas face many barriers in trying to successfully teach the child with AD/HD in the regular classroom. Most of the children in the state of West Virginia identified as AD/HD are being served under Section 504, in the regular classroom Consequently, many of the barriers are outside of the control of the teacher, but many are not. Barriers most often encountered are:

- Class size is too large;
- Limited school resources;
- Inflexible standards that demand that each child meet identical performance standards;
- No training in positive behavior modification techniques that are applicable to the classroom; i.e., problems in arenas most likely to be affected by attention deficits, such as unstructured situations, large group instruction, transitions, etc.;
- No specific training in accommodations for children with AD/HD in the classroom; i.e., techniques to enhance attending, word production, and social adjustment;
- Not enough time in the day to work with the child with AD/HD;
- Frustration with child's perceived inabilities;
- Inconsistent performance of the child.

The problems being encountered have provided a renewed interest in training for teachers. However, the emphasis of the training that is being requested has changed. This change reflects the need to have training that has been designed for AD/HD students who are at a higher risk for developing social-emotional and learning difficulties and with the understanding that the problems must be addressed by a collaborative team very early in the child's school career in order to reduce the need for long-term special education services.

Since the reauthorization of IDEA in 1990 and most recently in 1997, educational changes for inclusive instruction have exploded. The educational environment of the student with AD/HD occurs primarily within the general classroom setting. Members of the Professional Group for ADD and Related Disorders (PGARD, 1991), using an AD/HD prevalence figure of 5 percent of the total school population, estimated that 65 percent of children with AD/HD did not receive special education services and are served within the general classroom setting. PGARD (1991) emphasized that regular education must assume the responsibility for the education of children with AD/HD. Consequently, the challenge for teacher educators is to develop teacher training programs to allow the general education teacher to recognize the special needs of all children with AD/HD and to learn to make modifications within the classroom environment.

Fowler (1992) estimates that if teachers are trained to recognize the special needs of children with AD/HD and are trained to provide appropriate classroom modifications, then about 50% of students with AD/HD can be appropriately served within the regular education programs. Of the remaining 50%, many can also be served in the regular class by having regular and special educators work together as a collaborative team.

Extensive research has been conducted over the years to determine the qualities of a good teacher. The effective teaching studies show that the following teacher characteristics are good indicators of successful educational outcomes for all children: (Berliner, 1984; Bickel & Bickel, 1986; Brophy & Good, 1986; Kauffman & Trent, 1991; Rosenshine & Stevens, 1986).

1. Strongly engage students within academically focused, teacher-directed classrooms, using sequenced, structured materials;
2. Focus on academic matters using activities with goals that are clear to students;
3. Allocate sufficient time for instruction;
4. Frequently monitor student performance and check student work;
5. plan lessons and questions to obtain many correct responses from students; and
6. Offer immediate feedback to students on academic tasks.

Coupled with the above characteristics, teachers who work successfully with children with AD/HD should also possess the following characteristics:

1. Positive attitude toward inclusive classes. Teachers must believe that all children can benefit from being in an integrated learning environment and that an inclusive classroom will help to prepare children to live an in an integrated society as an adult.

2. The ability to be a collaborative member of an interdisciplinary team as most AD/HD students will need the collaborative efforts of special and regular educators.

3. Knowledge of behavior management techniques; and

4. Personal characteristics such as being fair, firm, warm, and responsive, patient, have a sense of humor and be able to establish a rapport with students. (Lerner, 1995).

Students with Attention Deficit/Hyperactivity Disorders (AD/HD) present a wide range of challenges, problems, and opportunities for educators due to their diverse backgrounds, learning styles, and unique assessment needs. Of major importance are the problems of developing instructional strategies specifically designed to match the special needs of this population. The implication for educators is to develop and implement innovative and diverse instructional strategies that address the cognitive styles and their relationship to problems inherent to AD/HD. Many of the current approaches have not been effective, and a general consensus for new, special education strategies with AD/HD is apparent, allowing each student's needs to be met on an individual basis.

A U.S. Department of Education policy memorandum (1991) clarifies the eligibility of children with AD/HD for special services in the schools. The nature and severity of the problem dictates that a child with AD/HD may qualify to receive either special education services under the IDEA or accommodations in the regular classroom under Section 504 of the Rehabilitation Act of 1973. The policy memorandum highlights the critical role of regular classroom teachers in meeting the needs of the child with AD/HD. Schools are obligated to develop awareness of AD/HD among all school personnel, especially regular classroom teachers (Parker, 1992). If regular classroom teachers are to be knowledgeable about the accommodations and adaptations that can be made in regular classrooms they will need special training and preparation.

Fowler (1992) estimates that if teachers are trained to recognize the special needs of children with AD/HD and are trained to provide appropriate classroom modifications, then about 50% of students with

AD/HD can be appropriately served within the regular education programs. Of the remaining 50%, many can also be served in the regular class by having regular and special educators work together as a collaborative team.

Special Education teacher training programs attempt to train teachers to meet the individual needs of students based on their current educational performance. Teaching techniques must be applicable to the AD/HD student so that each individual student can benefit from the instructional process. This is done by matching instructional strategies appropriately to the individual needs of the individual child.

Sandra Reif (1993, p. 53), states that "...students retain 10 percent of what they read; 26 percent of what they hear; 30 percent of what they see; 50 percent of what they see and hear; 70 percent of what they say; and 90 percent of what they say and do." Most children with AD/HD respond best to a multimodal approach to instruction. Consequently, by combining visual, auditory, kinesthetic and tactile approaches to learning the student become physically involved and through active participation the student is more likely to internalize the concept being taught. (Wright et al, 1997). Teachers in the elementary grades are more likely to use such multimodal techniques as movement, music, and singing (Franklin, 1992).

According to Lerner et al. (1995), regular classroom teachers must provide ways of managing the three primary traits of AD/HD; inattention, impulsivity, and hyperactivity. The teacher must directly modify the classroom and their instruction. Inattention includes several phases of attention; (1) coming to attention, (2) focusing attention; and (3) sustaining attention. Ways to strengthen attention may include the student's ability to improve organizational skills, improving sustain attention, and improving the student's ability to listen.

Impulsivity is recognized as a major trait of AD/HD also. General ways of working with impulsive students in the regular classroom include: (1) adapting the curriculum; (2) helping students learn to wait; (3) helping student manage time; and (4) encouraging compliant behavior. Teachers are often amazed that many parts of the curriculum can readily be changed, modified, or adapted, without sacrificing the integrity of the basic curriculum. The inability to wait is often manifested as bossiness or impatience in students. Teachers must understand the underlying causes of this disruptive behavior and should not assume that the behaviors are aggressive in intent.

Unless instructed early on in their academic careers, students with AD/HD will become procrastinators, a trait that may likely be retained throughout their adult lives (Fowler, 1992; Frick & Lahey, 1991). The need for ample physical movement and/or activity must be taken into account when a teacher is planning classroom accommodations. Modifications and accommodations can involve trying to channel excessive activity in more acceptable behaviors such as allowing standing during seat work. Finally, teachers will need to understand that children with AD/HD will respond and benefit from increased stimulation and novelty on easy and repetitive tasks but not on difficult or new tasks (Zentall, 1985). Stimulating learning environments will help most students attend better to the learning activity.

Summary

It is probably the right time to step back and to take an in-depth look at the needs of both teachers and children identified as AD/HD. These needs are not unique to rural areas, but are compounded by the ruralness and lack of support services and training programs in rural areas. This then becomes a challenge to personnel preparation programs at both the undergraduate and graduate level as far as developing programs and providing the research to indicate what those programs need to be as we move into the next century and further develop inclusive classrooms.

References

Berliner, D.C. (1984). The half-full glass: A review of research on teaching. In P.L. Hosford (Ed.), Using what we know about teaching (pp. 51-77). Alexandria, AV: Association for Supervision and Curriculum Development.

Bickel, W., & Bickel, D. (1986). Effective Schools, classrooms, and instruction: Implications for special education. Exceptional Children, 20 (6), 489-519.

Brophy, J.E., & Good, T.L. (1986). Teacher behavior and student achievement. In M.C. Wittock(Ed.), Handbook of research on teaching (3rd. ed., pp. 328-275), New York:Macmillan.

Fowler, M. (1992). CH.A.D.D. educators manual: An in-depth look at attention deficit disorders from an education perspective. Plantation, FL: CH.A.D.D.

Frick, P., & Lahey, E. (1991). Nature and characteristics of attention-deficit hyperactivity disorder. School Psychology Review, 20 (2), 163-173.

Franklin, M.E. (1992). Culturally sensitive instruction practice for African-American learners with disabilities. Exceptional Children 59 (2), 115-122.

Kaufman, J., & Trent, S. (1991). Issues in services delivery for students with learning disabilities. In B. Wong (Ed.), Learning about learning disabilities (pp. 466-485), San Diego: Academic Press.

Lerner, J.W., Lowenthal, B., and Lerner, S.R. (1995). Attention Deficit Disorders. Pacific Grove, CA: Brooks-Cole.

Professional Group for ADD and Related Disorders. (1991). Response to the ADD notice of inquiry by the Professional Group for ADD and

Related Disorders (PGARD), 28b Fairview Road, Scarsdale, NY, 10582.

Rief, S.F. (1993). How to Reach and Teach ADD/ADD/HD Children. West Nyack, New York: The Center for Applied Research in Education.

Rosenshine, B., & Stevens, R. (1986). Teaching functions. In M. Wittock (Ed.), *Handbook of research on teaching* (3rd. ed., pp. 376-391). New York: Macmillan.

U.S. Department of Education. (1991, September 16). Clarification of policy to address the needs of children with attention deficit disorders within the general and/or special education . Memorandum.

Wright, J.V., Morton, R.C., and Beale, E.W. (1997) Including the Multicultural Student with AD/HD in the regular classroom. Attention 4 (2), 28-31.

Yesseldyke, J., Dawson, P., Lehr, C., Reschly, D., Reynolds, M., and Telzrow, C. (1997) *School Psychology: A Blueprint for Training and Practice II.* Bethesda, MD., National Association of School Psychologists.

Bryan W. Huwar, Ph.D.
Clarion University of PA
Clarion, PA

CLARION UNIVERSITY OF PA & SMILES AMERICORPS

Collaborations with Basic Education

Introduction

The Department of Special Education and Rehabilitative Sciences at Clarion University of Pa and SMILES AmeriCorps have engaged in a myriad of collaborative projects with basic education and community agencies. The goal of these projects has been to improve the quality of educational services available to all students. Included amongst these projects are Summer SMILES, Partnerships in Education Project, the Superintendent's Initiative, and Rural Pennsylvania Reads. Each of these will be addressed separately in the following sections.

The umbrella for all partnerships, including Rural PA Reads (R-PA-R) is the Partnerships in Education Project (PEP). A brief history of the initial project of PEP, and the Superintendent's Initiative, follow to provide a backdrop for the evolution of the R-PA-R.

Partnerships in Education Project

The Partnerships in Education Project grew out of the school restructuring movement that has been occurring in the Commonwealth of Pennsylvania. Prominent amongst the school restructuring initiatives was inclusion. Local school districts were being faced with the need to include students with disabilities but did not have the support, either fiscal or personnel, to insure the success of these students in their schools. The Department of Special Education and Rehabilitative Sciences at Clarion University recognized the need to assist and serve these districts and did so through the Partnerships in Education Project.

This innovative project leveraged the fiscal and personnel resources of the Union School District, Clarion University, and a grant from the PA Department of Education Higher Education Initiative. During the 1995-96 academic year, the Department of Special Education and Rehabilitative Sciences needed to hire a temporary faculty member for one year to replace a faculty member on sabbatical leave. The department hired a special education teacher from the Union School District to teach introductory special education classes. This teacher, who has a master's degree and has served as a cooperating teacher for both student teacher's and bloc students, had a wealth of practical expertise that she could share with our university students. The teacher's position in the school district was filled by two university graduate assistants who were certified special education teachers. The resulting "teacher exchange" created a pool of money that the school district used to provide inservice training on inclusion to its staff members. Faculty members from the Department of Special Education and Rehabilitative Sciences provided this inservice training in the form of three graduate level classes. The teacher exchange also created a situation in the school district in which two teachers could now provide support for inclusion.

This support for inclusion was further augmented by the use of three education service scholars who were funded by a grant to the Department from PA Campus Compact. These service scholars provided additional support for inclusion.

Additional services were provided in the form of a homework center, developed and implemented by two Department faculty members and funded by a grant through PA Campus Compact. The homework center provided after school tutorial and homework assistance to students in grades 4, 5, and 6. The homework center was staffed by university faculty members, the three service scholars, three volunteer teachers, volunteer preservice teachers from the Department of Special Education and Rehabilitative Sciences at Clarion University and volunteer high school students. In addition to tutoring services, transportation and study skills instruction were provided.

Superintendent's Initiative

The successes experienced with PEP during the 1995-96 academic year spawned replication efforts in 12 school districts during 1996-97. To distinguish this project from the prototype effort of the previous year, as well as attract the interest of area school district Superintendents, this project was called Superintendent's Initiative (SI).

This project, now in its second year, has as its overriding goal to collaboratively join the personnel and financial resource of basic education, higher education, and community agencies to improve the quality of educational services available to all students. Special emphasis is placed on enabling school districts to meet unmet needs in the district. The Superintendent's Initiative accomplishes this by placing university graduate students into school districts. These university students are members of the Keystone SMILES AmeriCorps program. In exchange for 900 hours of service to the schools, students receive a living allowance of $4,635 and an educational award of $2,363. Additionally, interest on student loans may be forgiven or suspended while serving. The AmeriCorps education award is provided at the end of the year of service and can be used to pay tuition at any accredited university, college or trade school.

The project is funded jointly by Clarion University, the school districts, and Keystone SMILES AmeriCorps. Currently, the Superintendent's Initiative project uses 24 AmeriCorps members to serve the needs of 12 school districts across eight counties in rural western and northern Pennsylvania. Included amongst these school districts are Clarion Area, Clarion-Limestone, DuBois, Forest Area, Franklin, Keystone, Lakeview, Mars Area, Mid-Western IU 4, North Clarion, Punxsutawney, Union and the Clarion Educational Talent Search. Members of the Superintendent's Initiative program provide support for inclusion, operate in school suspension programs, serve as computer lab assistants, provide in school and /or after school tutoring, develop and maintain truancy programs, and provide alternative education programs.

Upon entering into a formal SI partnership university faculty meet with teams of district administrators and teachers to identify and prioritize school district needs. From the above mentioned needs assessment, a priority target(s) is (are) selected and a Service Plan is developed. The Service Plan includes; a goal statement, implementation procedures, position description for an Education Service Worker(s), and evaluation outcomes. The Service Plan is the basis for the intervention to be conducted and is unique to each project and/or school district. The project provides the flexibility to address a wide array of needs while maintaining a consistent operation approach across all projects.

Rural Pennsylvania Reads

Opportunity to expand the activities of the Partnerships in Education Project for the 1997-98 academic year resulted due to a combination of local and national factors. At the local level, the activities of the initial project (then known as Partnership in Education Project) and the Superintendent's Initiative caused area superintendents to enthusiastically support the partnership initiatives of Clarion University and SMILES AmeriCorps. This support provided the creditability and respect necessary for continuing partnership efforts and expanding the number and direction of future initiatives. At the national level, President Clinton's America Reads Challenge, provided the impetus for creating additional local educational services to children in the poor, rural schools of Western Pennsylvania. The timely coalescence of local and national priorities, concomitant with the successes of previous partnerships, resulted in the creation of the Rural Pennsylvania Reads initiative.

This project, in its first year, places teams of university graduate students into school districts to enable school districts to promote and sustain literacy for students in grades K-3. The program is based on the America Reads program whose goal is to ensure that every 4th grader is able to read and write. The project leverages the federal work study funds of Clarion University with funds from the school districts and Keystone SMILES AmeriCorps to provide services which could not be otherwise provided to children in grades K-3.

The Rural Pennsylvania Reads project, like the Superintendent's Initiative project, utilizes university students who are members of the Keystone SMILES AmeriCorps program. In exchange for 900 hours of service to the schools, students receive a living allowance of $4,635 and an educational stipend of $2,363. Additionally, interest on student loans may be forgiven or suspended while serving. The AmeriCorps Education award is provided at the end of the year of service and can be used to pay tuition at any accredited university, college or trade school.

Currently, the Rural Pennsylvania Reads project uses 18 AmeriCorps members to serve the needs of children in six school districts across five counties in rural western and northern Pennsylvania. Included amongst these school districts are Bradford, DuBois, Franklin, Mars Area, North Clarion, and Union.

In each participating school district, four teachers team with the AmeriCorps members to develop a plan for the reading project. Program guidelines as stipulated by Clarion University faculty include a focus on children in grades K-3, pre and post assessment, development of individual reading plans for each participating child, and an increase of reading services by 100% to all participating children. Each school team has been free to develop a customized reading program as long as the program falls within the parameters outlined by university faculty. Thus, schools are using a variety of different techniques to increase reading time by 100%. Included amongst these are before and after school tutoring programs; reading programs during breakfast, lunch, and/or homeroom; small group activities in the classroom during reading time; computer assisted reading instruction on basic letters, letter sound identification, word families, and reading; and summer programming. Additionally, schools have taken different approaches to the pre and post test assessment requirement. Clearly, the Rural PA Reads program has afforded school districts enough flexibility so that the identification and intervention processes could be custom tailored to the needs of the students, the school, and the community.

All members of Rural PA Reads received staff development in the form of two university courses: SPED: 580: Special Reading Instruction and SPED: 562: Service Learning. Furthermore, all members received mandated training in CPR, First Aid, Blood born pathogens, situational leadership, conflict resolution, and Project Wild. While working in the field, AmeriCorps members are supervised by school district personnel, AmeriCorps staff, and faculty members from the Department of Special Education and Rehabilitative Sciences.

This project, combined with the Superintendent's Initiative project, has afforded 42 graduate students the opportunity to further refine and develop their skills. It has also created an infrastructure whereby representatives of the participating school districts meet monthly to discuss concerns relative to the projects. These luncheon meetings also provide ample opportunity for Department faculty members and school district personnel to discuss other pressing issues and situations. Indeed, the most recent luncheon discussion focused on the districts' concerns about serving recalcitrant students. Future discussion will likely center on the feasibility of establishing alternative school programs.

Margaret Cotter, Director
Cooke County Sp. Ed. Coop.
1201 Lindsay Street
Gainesville, Tx 76240

LONG DISTANCE LEARNING: A COLLABORATIVE APPROACH FOR A SPEECH PATHOLOGY PROGRAM

The shortage of master's level Speech/Language Pathologists in Texas is a burden that all school administrators have had to face for the past five years. For the administrator of rural schools, this shortage has reached crisis portions. Many are simply unable to compete with the higher salaries and sign-on bonuses of the rehabilitation agencies and larger school districts.

One alternative for rural areas is to hire bachelor's level Speech Assistants. In Texas, individuals with only a bachelor's degree in Speech Pathology are limited to practicing only in the public schools and must be supervised by a master's level certified/licensed Speech/Language Pathologist (SLP). This supervisor also is required to conduct all assessments and to participate in the development of each student's Individual Education Plan (IEP). This situation created a dilemma, unable to attract master's SLPs, the rural school districts could only recruit bachelor's SLPs. However, without a master's level clinician to supervise their work, the Speech Assistants could not work.

In 1994, the Texas Council of Administrators of Special Education (TCASE), disseminated a survey to 371 directors of special education programs across the state. The purpose of this survey was to collect information regarding the number of vacant positions for SLPs, the anticipated number of new positions for the next five years and the number of individuals that need to upgrade their credentials to obtain a master's degree in speech /language pathology.

The survey concluded the existence of a shortage of SLPs to provide services in all Texas schools. It also reported on the large numbers of SLPs needing to upgrade their credentials to meet the highest standard, the master's degree. In Texas, depending upon the current credentials and licensing status of the SLP the master's must be completed by the year 2003 or 2013. The TCASE survey also indicated many bachelor's SLPs were leaving the speech field to work in other areas within the public school system because university training programs were not accessible to persons living in rural areas. For bachelor's SLPs living in rural settings, attending classes at the universities that offer graduate level SLP degrees often meant driving 6 to 10 hours round trip to attend classes on campus. Further, many of the graduate level programs would only accept students on a full time basis.

For the working Speech Assistant in rural districts, going to graduate school was impossible under the traditional standards. Budget constraints coupled with the rigorous and restrictive faculty/student ratio at the graduate level and supervision standards required by ASHA, were causing most universities with training programs for speech/language pathologists not to expand or seek nontraditional approaches such as distance learning. Texas schools would soon be facing jeopardizing their federal compliance status and receipt of federal funding if unable to provide students with appropriate speech/language pathology services. Not providing the amount of services required for a student because of personnel shortage is not an option. Nor is it an excuse when a district is monitored or a compliant is filed against them.

The Texas Education Agency (TEA) approached Texas Woman's University (TWU) with a creative solution to this dilemma. TEA proposed a long distance learning program using the Texas Education Telecommunications Network System (TETN). This TETN system connects the twenty Educational Services Centers across the state of Texas. Using T1 lines, this system can broadcast from one location to several creating a means to reach rural areas. Students in rural settings could drive into their Regional Educational Service Center to attend classes televised live via a compressed computer video system.

In 1995, Texas Woman's University initiated the first TETN classes in the West Texas area. The vast and sparsely populated West Texas region was in very critical need of master's level SLPs. The local education agencies (LEA) and the Texas Education Agency (TEA) provided a strong collaboration of funding efforts. Four Regional Education Service Centers provided the home basis for this project. TWU professors traveled each month to one of the four education centers to broadcast classes. This two and one half-year project began with 63 students and concluded with 57 receiving their master's level degree in speech/language pathology.

This West Texas/TWU project was under constant scrutiny by several other Texas universities that offer master's level SLP programs. There was concern that the distance learning project would be unable to meet the high ASHA standards for course and practicum requirements. Much debate existed over the fact that the students would not have the benefit and accessibility of classes held on the university campus. The end of the project dispelled these concerns with the 57 West Texas/TWU master's level candidates scoring higher than any other Texas university's master's level SLP's. The project had proven itself in the vast West Texas ranch lands. The next step was to offer the project statewide.

In the fall of 1996, participation was extended to the twenty Regional Education Service Centers by the Texas/TWU TETN Speech Pathology project. Eighteen Education Service Centers received onsite visits by TWU professors and a statewide Project Coordinator. Prospective students were required to attend this initial conference. Admission requirements were explained and transcripts were reviewed. Students without a bachelor's degree in SLP were expected to earn a master's degree in SLP over a course of 32 months. Students who were accepted into this program with a bachelor's degree would earn their master's SLP in 27 months.

TWU ADMISSION REQUIREMENTS

- Completion of at least 3 hours of science , 3 hours of mathematics and 6 hours of behavioral sciences
- Minimum score of 700 on Graduate Record Examination (GRE)
- GPA of at least 3.0 in the last 60 hours of undergraduate coursework.
- Submission of two written letters or recommendations to TWU.
- Submission of written essay stating career goals.
- Submission of written letter of support from local school district that will be providing employment and supervision.

TWU REQUIREMENTS FOR RETENTION IN PROGRAM

- Must not receive more than one C in graduate coursework. Student receiving a C in a course must retake the course on campus. Student receiving two Cs will be dismissed from the program.

- Student who does not demonstrate appropriate technical skills as well as appropriate professional abilities will be dismissed from the program
- Students not attending classes and practicum on a regular basis will be dismissed from the program.

Originally 120 students were to be accepted into the program. This would allow each Education Service Center to have 6 students in the TWU/TETN program. After applications were reviewed and screened, 16 Education Service Centers were involved with 117 students. In January 1997, leveling classes began for students who did not hold a bachelor's degree in SLP. The 1997 summer session was the starting point for those students with a SLP bachelor's degree.

Each Education Service Center (ESC) was required to employ a part-time site coordinator who would present at all class sessions. A computer technician was also required to be present during all class transmissions. Each ESC would contribute $28,000.00 for the site coordinator. The Texas Education Agency contributed $1million to the project. TWU would receive a $196,000.00 grant from TEA to fund a full time coordinator and secretary. The following list includes additional responsibilities of all the parties involved:

TWU RESPONSIBILITIES

- secure state university coordinating board approval
- facilitate meeting among ESC staff, TWU faculty, and program candidates
- process graduate school applications and admit eligible students to graduate program
- identify, hire, and compensate faculty to teach courses and evaluate student performance
- develop course content
- set and enforce course standards and grading
- serve on advisory board
- work with ESCs and districts to select and approve appropriate practicum supervisors
- train practicum supervisors
- provide funding for non-school practicum supervisors
- process paperwork for ASHA certification and Texas licensure

STUDENT RESPONSIBILITIES

- must attend first site (regional service center meeting)
- satisfy all TWU entrance requirements
- students must take courses when they are offered
- pay tuition, fees, and other expenses
- arrange transportation to and from classes, practicum sites, and related meetings
- maintain grades, level of professionalism, and skills
- complete all class assignments by the date instructor designates
- abide by all TWU, ESC and local district requirements

ESC RESPONSIBILITIES

- serve as first point of contact for questions regarding the project
- coordinate the process for recruiting students into the program
- identify and obtain sources of funding
- serve on advisory board
- serve as off-campus TETN learning center
- provide technician
    - get broadcast up and running

  - remain on site for each class broadcast

- provide coordinator
  - coordinate within ESC region/area
  - assist in placing students at practicum sites
  - attend supervisor training
  - consult with supervisors, as needed
  - disseminate information to supervisors, as needed
  - pass out handouts
  - collect homework and assignments
  - forward homework and assignments to instructor (TWU)
  - notify technician of any broadcast problems
  - conference with classroom instructor (TWU) regarding student concerns related to coursework (primarily by telephone or fax)
  - meet (via TETN) monthly with State Program Coordinator
  - participate in advisory committee meetings
  - advise and assist students when registering for the next semester

LOCAL DISTRICT RESPONSIBILITIES

- allow students to participate in on-the-job practicum
- provide practicum sites
- assist TWU in identifying supervisors for public school site practicums
- provide funding for public school practicum supervisors
- serve as possible source of funds for students' training (optional)

PRACTICUM SUPERVISOR REQUIREMENTS

- be ASHA certified
- be approved by TWU
- must attend supervisor in-service training
- must attend required TETN supervisor meetings, bimonthly
- plan initial therapy, gradually allowing students to assume more decision making
- conduct weekly supervision conferences
- provide daily written evaluations , gradually decreasing frequency as student progresses
- will be responsible for giving practicum grade
- provide documentation of supervision
- co-sign and be responsible for all paperwork
- assist student in applying skills and knowledge

The impact of this program on rural school districts in Texas will certainly be remarkable. Currently, 117 bachelor's level students are participating in the program. Unable to attend traditional classes on campus, these students have been given the opportunity to continue working to serve students in their rural school districts while at the same time furthering their education. In 1999, these 117 students will graduate with master's degrees in Speech/Language Pathology. Considering that most universities graduate between 10-15 master's level candidates every two years, the implications of these numbers is staggering. Not only will the quality of services improve for the rural school districts, but also the availability of certified

Speech/Language Pathologists, to provide additional supervision of other Speech Assistants. This would be a windfall for the rural school districts.

Many long distance learning programs have relied on videotaped classes that were to be viewed by off-campus students at a later time. The TETN classes provide real-time instruction and active classroom participation. Off-campus clinical practicums are achieved through district-level campus participation. The beginning TETN student identified students on her/his existing school caseload for inclusion in the University's clinical practicum. Rural graduate students are able to access the University's library via the Internet. Active, ongoing dialogs between students across the state are achieved through a list service established by the university. Supervisors, professors and students all participate in these dialogs, asking questions, clarifying information and sharing ideas.

By utilizing the state's central education agency in collaboration with a state university, other states can replicate the Texas/TWU TETN Project. The result of such programs will only enhance the quality of services provided to the children in rural school districts.

Dr. Suzanne Harrison
Gonzaga University
Spokane, WA 99258

A COLLABORATIVE COMPUTERIZED LANGUAGE TRAINING PROJECT BETWEEN GONZAGA UNIVERSITY AND ST. LUKE'S REHABILITATION INSTITUTE

BY

DR. SUZANNE HARRISON AND JULIE FISHER GIMBEL

BACKGROUND

As we enter the 21st century, rural America stands at an economic crossroads (Combs & Bailey, 1992). Rural school districts often find themselves at the center of controversy attempting to meet the needs of the local community as well as trying to respond to national requirements, especially now with the National Goals 2000 in the forefront. Several educational practitioners have recommended school-community alliances in an effort to support community/educational development (McCune, 1986; Sher, 1988). Increasingly, universities and other organizations are establishing partnerships to combat the lack of funding, fewer resources, and the desire to form collaborative ventures to meet the needs of their clients.

The purpose of this presentation is to share information about a partnership that evolved during 1997 based on the need to access the Fast ForWord computerized program developed by Scientific Learning Corporation (SLc). Fast ForWord is an innovative approach to receptive language and auditory processing remediation based on two decades of research and utilizes computer technology with internet and CD-ROM capabilities. Fast ForWord is based on the pioneering research work of Dr. Paula Tallal, a leading cognitive neuroscientist from Rutgers University, and Dr. Michael Merzenich, a leading authority on brain plasticity from the University of California at San Francisco. Fast ForWord works best for children with such classifications as Communication Handicapped (Receptive-Expressive Language Impairments), Dyslexia, Language-Learning Disabled, Sensory Integration Deficit, or Central Auditory Processing Disorder. The primary focus of the Fast ForWord Language training program is to increase an individual's rate of auditory processing.

"Over the past decade there has been an emergence of a new understanding of how changes in the brain account for perceptual learning, cognitive skill learning, and motor skill learning" (Merzenich, 1997, p. 1). The discovery of lifelong 'brain plasticity' has led to an important re-thinking about the origins of, and the treatments of, human ability and disability. SLc's Fast ForWord program evolved from this brain research. Merzenich (1997) further mentions that about 15% of all children create their early language constructs in an alternative way by integrating sound chunks that extend over the entire period of syllables and storing information about speech using an integrated syllable-based representation as contrasted with a normal, phoneme-based schema. The brains of these children have not developed the skill of separately distinguishing the syllable and word sound pieces from which syllables are constructed. These children are also significantly impaired in how their brain distinguishes different tonal parts of sound. They have massive interferences between fast, successive sounds and between phonemic pieces of speech. If sound is consistently perceived as muffled during the first 6 to 10 months of life, we believe that the brain will naturally adopt this alternative, integrated syllable-based processing mode. In such circumstances, the child cannot make reliable distinctions between fast, successive phonemic events. Language-learning impaired children simply do not progress in their development of hearing fast, successive sounds as do normal children. It was discovered that through training a child could make large improvements in the ability to identify rapidly successive sounds by a particular form of practice. Fast ForWord exercises represent what SLc believes to be the most direct way to overcome the deeply embedded, perceptually and cognitively limited speech and language processing that plagues these children (Merzenich, 1997).

Fast ForWord provides exercises in such skills as temporal sequencing, building rate of processing, and other speech and language skills to include phonology, morphology, syntax, and grammar. Children who benefit most from the training are between ages four and fourteen, particularly those in the preschool and primary grades. Initial screening takes place by utilizing a comprehensive standardized language test and a measure of receptive phonology.. Children are also screened on the Sequential Temporal Analysis Report (STAR) developed by SLc to quantify auditory processing. The primary focus of the Fast ForWord Language training program is to increase an individual's rate of auditory processing.

Each child must be "licensed" with SLc, a cost of $850 to the parents. The software cannot be shared with other families. The contract is for the use of the software and the internet connection between the Fast ForWord professional, SLc, and the child's computer. The internet connection makes it possible for the Fast ForWord professional to modify each child's program every week. A Fast ForWord professional (speech/language pathologist or special educator) trained by SLc provides services to the child.

The Fast ForWord software program requires either a MacIntosh or PC. Macintosh specifications require a PowerPC 601, 603, or 604 processor, MacOS 7.5.5 or higher operating system, and double-speed CD-ROM drive, while the PC computer needs a Pentium 66 MHz processor minimum (recommended Pentium 166 MHz), Windows 95 operating system, and quad-speed CD-ROM drive. The computer must also have 16 MB of memory, 16-bit sound, 28.8 kbps baud modem with Direct Internet connection, Netscape Navigator 3.01 or Microsoft Internet Explorer 3.01 or higher, and closed-type stereo headphones.

Various opportunities for access to Fast ForWord are available. The child may receive services from the professional on site or off site in the home. The professional must be connected to the system to conduct the monitoring and ensure compliance. A compliance and token economy system is incorporated into the program. The training time for each child is basically 20 minutes per game, five games per day, and five days per week. Completion of the program is achieved with 90% success on five out of seven of the games over six to eight weeks of game playing. Supervision of the child is critical to the success. Data is uploaded to SLc every one to three days in order to adapt the training program to the needs of the individual child and for the Fast ForWord professional to monitor the child's progress. Detailed data is maintained throughout the program.

BEST COPY AVAILABLE

GONZAGA UNIVERSITY AND ST. LUKE'S REHABILITATION INSTITUTE PARTNERSHIP

In 1996, Julie Gimbel, speech/language pathologist from St. Luke's Rehabilitation Institute, and I became interested in the research conducted by Dr. Paula Tallal and Dr. Michael Merzenich. I was trained as a special educator, and now am a professor in the department of teacher education. I was particularly interested in children with specific language disorders. Julie's work as a speech/language pathologist at St. Luke's brought her in contact with many preschool and primary-age children with speech and language deficits. She was seeking alternative avenues to help some of these children. Both Julie and I attended a Central Auditory Processing Symposium in New Jersey that fall, 1996. As we continued to talk about Tallal and Merzenich's work and the use of technology to provide a specially designed program for children (Fast ForWord), we both realized that without one another we would not be able to access the Fast ForWord program.

Lack of funding and technology became an issue for Julie and I in attempting to access Fast ForWord for identified language-learning impaired children who would benefit from the Fast ForWord training program. Therefore, we decided that forming a partnership might be our answer in providing Fast ForWord services. Developing the partnership took time, building on openness, trust, being positive, and taking the initiative (Thomas, Bennett, Bascemi, & DeLuca, 1996). Tasks that Julie and I considered included developing an interagency agreement to clarify the role of each group, setting specific goals for the partnership while defining clear and concise roles for the members, understanding risks and benefits for each party, ensuring that our plans would be carried out, expectations for the partnership, and including an evaluation of the children in the program as well as evaluating the partnership. Success of a partnership is dependent on effective leadership to include communication skills, encouragement, support, decision making, and empowerment to impact change successfully (Combs & Bailey, 1992). Taking into account these guidelines for a successful partnership, Julie and I determined that we must go forward with our collaborative work -- we were determined to access Fast ForWord for two identified learning-language impaired children we believed would benefit from the training as an alternative to traditional speech/language therapy and other remedial language treatment.

Julie became the professional trained by SLc (I have since been trained). St. Luke's did not have the required computers for the project since, at the time, Fast ForWord could be run only on MacIntoshes and St. Luke's owned PC's . Conversely, I was in a university site with access to MacIntosh computers on a regular basis. Through St. Luke's it became possible to obtain insurance benefits while I was not. Thus our partnership blossomed. We began our plan of action to establish a partnership, to screen children for training on Fast ForWord, and to get the program off the ground. By May 1997 we had established our partnership with both institutions in agreement. We wrote an agreement between the institutions and with the families with children needing the Fast ForWord program.

Due to scheduling factors, computer availability, and daily adult monitoring constraints, we chose to select two children to initially participate in the project -- one from the Spokane, Washington community and the other from a small community near Boise, Idaho. The parents from Idaho chose to have their daughter live with her grandparents for the summer in a rural community two hours from Spokane and then commute to Gonzaga University where the computer training program was located. For approximately eight weeks the two children progressed through the Fast ForWord program with both Julie and I taking turns monitoring the children each day. As the FastForWord professional, Julie assessed the data and made the necessary adjustments to each child's program. Pre- and post-testing took place for both children with demonstrated growth as determined on the LAC Test - Form B and the TOLD Test.

Child A (ten-year old)

LAC Test - Form B

	Pre Test Converted Score	Post Test Converted Score
Category 1A	9	9
Category 1B	18	18
Category II	36	42
Total	63	69

TOLD I:2 Intermediate

Sub Tests	Pre Test	Post Test
	Standard Scores	
sentence combination	4	5
vocabulary	7	8
word ordering	2	5
generals	6	8
grammar comprehension	8	8
malapropisms	7	8
Composites	Quotients	
spoken language	70	79
listening	83	87
speaking	61	74
semantics	79	87
syntax	66	75

Child B (five-year old)

LAC Test - Form B

	Pre Test Converted Score	Post Test Converted Score
Category 1A	8	9
Category 1B	6	15
Category II	12	30
Total	26	54

TOLD P:2 Primary

Sub Tests	Pre Test	Post Test
	Standard Scores	
picture vocabulary	13	14
oral vocabulary	11	11
gram. understanding	7	12
sentence imitation	5	8
gram. completion	7	9
word discrimination	7	12
word articulation	3	3
Composites	Quotients	
spoken language	83	99
listening	94	117
speaking	77	85
semantics	112	115
syntax	76	98
phonology	70	85

As determined by the LAC and TOLD tests, the child from Idaho (five-year old) showed the most growth while the child from Washington (ten-year old) demonstrated some growth. At the end of the eight weeks the child returned home to Boise, continuing with Fast ForWord on a home computer connected through internet to Julie in Spokane to monitor the child's daily progress. The ten-year old has not continued with the program due to family, schedule, and computer constraints. If the computer were set up in the home, the ten-year old would probably have continued the training program.

Julie and I found the partnership a rewarding one. It is a replicable model for rural, suburban, and urban communities. We were able to work well together and would like to continue servicing other children. What we have learned from the project, however, is that in the end, the time commitment for both of us was not realistic over the long haul. Much of the monitoring of the project was on our own time. Both Julie and I have been contacted by families wishing to access Fast ForWord. Some of these families live in smaller communities in Idaho, Montana, and Alaska. We would need to meet first with the families to determine eligibility. The program itself could be set up in their homes provided the family possesses computer capability with internet services to communicate with the Fast ForWord professional and SLc.

Greater accessibility to Fast ForWord is possible through school districts. Fast ForWord is beneficial to the large percentage of children currently receiving speech/language services. School districts in rural communities that have limited speech/language or special education resource room services due to time or financial constraints, or the lack of qualified certificated specialists could benefit from a partnership such as ours. The schools will need funding for the computer capability, service agreements for each child with SLc, and then contracting with a trained Fast ForWord professional to provide the training and monitoring of the program. Families living in rural communities may also be able to access Fast ForWord on their own, independent of the school district.

In summary, Fast ForWord uses cutting edge computer exercises that acoustically alter speech sounds so they are more readily distinguishable to language-learning impaired children. The training program is suitable for schools, clinics, and learning centers that work with language-learning impaired children. Accessibility should not be limited to urban or suburban communities. Julie and I envision Fast ForWord as a viable technological program reaching a greater number of children in rural communities who are not currently receiving help with traditional approaches to speech/language services.

BIBLIOGRAPHY

Churchill, J., Hodson, B., Jones, B., & Novak, R. (1988). Phonological systems of speech-disordered clients with positive negative histories of otitis media. Language, Speech, and Hearing Services in in Schools, 19, 100-106.

Combs, L. & Bailey, G. (1992). Exemplary school-community partnerships: Successful programs. Rural Educator, 13, 8-13.

Elliott, L. & Hammer, M. (1988). Longitudinal changes in auditory discrimination in normal children and children with language-learning problems. Journal of Speech and Hearing Disorders, 53, 467-474.

Hodson, B. (1994). Helping individuals become intelligible, literate, and articulate: The role of phonology. Topics in Language Disorders, 14, 1-16.

Hood, L. & Berlin, C. (1986). Auditory Evoked Potentials. Austin, TX. Pro-Ed Publishers.

Hood, L., Berlin, C., & Allen, P. (1994) Cortical deafness: A longitudinal study. The American Academy of Audiology, 5, 330-342.

Katz, W., Curtiss, S. & Tallal, P. (1992). Rapid automatized naming and gesture by normal and language-impaired children. Brain and Language, 43, 623-641.

McCune, S. (1986). Guide to strategic planning for educators. Alexandira, VA: Association for Supervision and Curriculum Development.

Merzenich, M. (1997). Neurological bases of fast forword training for language learning impaired children. Message to professionals and parents. Fast ForWord Certification Seminar Manual. (p. 1-5). Berkeley, CA: Scientific Learning Corporation.

Merzenich, M., Jenkins, W., Jenkins, W., Johnston, P., Miller, S., Schreiner, C., & Tallal, P. (1996). Temporal processing deficits of language-learning impaired children ameliorated by training. Science, 271, 77-81.

Paden, E. (1994). Otitis media and disordered phonologies: Some concerns and cautions. Topics in Language Disorders, 14, 72-83.

Phillips, D.P. (1995). Central auditory processing: A view from auditory neuroscience. *American Journal of Otology, 16,* 338-352.

Prelock, P., Miller, B., & Reed, N. (1995). Clinical exchange: Collaborative partnerships in a language in the classroom program. *Language, Speech, and Hearing Services in Schools, 26,* 286-292.

Sher, J.P. (Ed.) (1988). *Class dismissed: Examining Nebraska's rural education debate*. Hildreth, NE: Nebraska Rural Community Schools Association.

Sloan, C. (1991). *Treating auditory processing difficulties in children*. San Diego: Singular.

Stark, R. E., Bernstein, L. E., Condino, R., Bender, Tallal, P., & Catts, H. (1984). Four year follow-up study of language impaired children. *Annals of Dyslexia, 34*, 49-68.

Stark, R. & Tallal, P. (1979). Analysis of stop-consonant production errors in developmentally dysphasic children. *Journal of the Acoustic Society of America, 66*, 1703-1712.

Tallal, P., Miller, S., Bedi, G., Byma, G., Wang, X., Nagarajan, S., Schreiner, C., Jenkins, W., & Merzenich, M. (1996). Language comprehension in language-learning impaired children improved with acoustically modified speech. *Science, 271,* 81-84.

Tallal, P. & Curtiss, S. (1990.) Neurological basis of developmental language disorders. *Brain and Language, 9*, 182-198.

Tallal, P., Curtiss, S., & Kaplan, R. (1988). The San Diego longitudinal study: Evaluating the outcomes of preschool impairment in language development. In S. E. Gerber & G. T. Mencher (Eds.), *International perspectives in communication disorders.* Washington, DC: Gallaudet University Press. Pp. 86-126.

Tallal, P. (1980). Auditory temporal resolution, phonics, and reading disabilities in children. *Brain and Language*, 182-198.

Tallal, P. & Piercy, M. (1973). Developmental aphasia: Impaired rate of non-verbal processing as a function of sensory modality. *Neuropsychologia, 11*, 389-398.

Thomas, D., Bennett, T., Buscemi, L., & DeLuca, D. (1996). Working together. *NHSA Journal, 15*, 3.

Wright, B., Lombardino, King, W., Puranik, C., Leonard, C., & Merzenich, M. (1997). Deficits in auditory temporal and spectral resolution in language-impaired children. *Nature, 387*, 176-178.

Dr. H. H. (Buddy) Hooper, Jr.
Turner Unified School District
Kansas City, Kansas
Dr. Donald (Don) Fry
University of Houston-Victoria
Division of Education
Victoria, Texas

ADMINISTRATIVE CONCERNS TOWARD INNOVATIONS (INCLUSION)

According to Drucker (1977), our society has become a society of organizations. Society pursues many, if not most, of its goals by establishing various organizations. These organizations vary in size, complexity, and purpose. Many factors influence the degree of success these organizations experience (Bennis & Nanus, 1985), but chief among these influencing factors is organizational leadership.

In 1977, according to Drucker (1977), organizations depend on leaders, are built by leaders, directed and held together by leaders, and are made to perform by leaders. More recently, Koontz, O'Donnell, and Weihrich (1986) wrote that leading is one of the most important human activities. They went on to report than "managers at all levels and in all kinds of enterprises have the basic tasks of designing and maintaining an environment in which individuals, working together in groups, can accomplish selected missions and objectives" (p. 3). In fact, Deal and Peterson (1990) conclude that nothing will happen without leadership. From their perspective, it is essential that, "from someone -- or someplace -- energy needs to be created, released, channeled, or mobilized to get the ball rolling in the right direction" (p. 4).

Bennis and Nanus (1985) assert that a leader "is one who commits people to action, who converts followers into leaders, and who may convert leaders into agents of change" (p. 3). To accomplish this, Kouzes and Posner (1987) suggest, "if someone is to lead us, that person must be able to stand before us and confidently express an attractive image of the future, and we must be able to believe that he or she has the ability to take us there" (p. 25). Formulating a picture of the future (visioning), helping others see that future as both possible and probable (sharing the vision), and coordinating the resources and responses necessary to move toward realizing that future (providing support) are among the most important responsibilities of organizational leaders. Leadership then is the additional influence up and beyond routine guidelines and directives.

Most often the individual in the top leadership position at the school site is referred to as the school principal. As the organizational leader, the school principal is obligated to provide direction to the staff and others as they determine campus goals and objectives for the site. In doing this, Blumberg (1985) suggests that administrators are expected somehow not only to keep the organization running as smoothly as possible, but also to influence the character and substance of educational life in the organization in which they work. School administrators then, as organizational leaders, are expected to behave in such a way that current operations go smoothly but also lead to a future that is purposefully different.

According to Wills and Peterson (1992), the leadership role provided by the administrator remains a critical linkage in translating educational reform legislation into change, improvement, or compliance. Similarly, Usdan (1994) described the school administrator as a linkpin of educational reform. He noted that school administrators are in a unique position to function in a proactive role in coordinating the many complex elements essential to wide spread educational improvement. The educational leader, then, is in a position of shaping the organizational structure (Thousand & Villa, 1990).

Today's administrators are faced with the ever increasing implications of responding to federal laws and civil rights court cases that have been initiated by state and federal governments (Hill, 1993). Administrators realize that with any change or new innovative idea will come resistance; the concerns of teachers, administrators and parents will have to be considered. According to Kelly (1974), "leadership is the performance of acts which assist the group in achieving certain ends" (p. 365). As the key leader in the school regarding the school's programs the administrator's concerns can facilitate the nature of or discourage the school's personnel in achieving certain desired changes. In other words, the school administrator's concerns influence the way those in the organization think, feel, and behave toward change. Their concerns toward the impending changes involved in new ideas or innovations will probably influence the level of acceptance of others in his/her school.

As districts move toward implementing new ideas or innovations, knowing what concerns administrators have allows the development of strategies for addressing them. Internal and external agents can better serve district leaders if they know the kinds of concerns these leaders have. Gaining insight into administrators concerns toward any innovation could help minimize problems in implementing this innovation at any level of the organization. Given the less than stellar history of successful implementation of planned changes in education information regarding implementation processes is crucial if the future is to boast of a greater number of successes.

Knowing an individual's stage of concern regarding an innovation is important information. It can guide facilitators of change in selecting the type of information, development activities, or support to provide the individual that will move him/her through several stages of concern and ultimately to the routine use of the innovation. The results of this study offer some interesting perspectives regarding the implementation of an innovation (inclusion) in rural schools and the role which the administrator plays in the implementation process.

The overall purpose of this paper is to provide information regarding the results of a study identifying the concerns of rural school administrators toward serving children with special needs in inclusive classroom arrangements, and to discuss the implications of these findings for change facilitators at all levels of the educational community. An overview of the instrument then could prove of significant importance.

An Overview

The study focused on rural school districts and administrator concerns (as measured by the Change Facilitator's Stages of Concerns Questionnaire) regarding the innovation of inclusion as a method of serving students with special needs. The major purpose of the study was to identify the concerns of rural school administrators toward inclusion.

The instrument used was the Change Facilitator Stages of Concerns Questionnaire (CFSoCQ) (Hall, et al, 1991). Permission to use the CFSoCQ was secured from the Southwest Educational Development Laboratory, Austin, Texas. The CFSoCQ is based on the seven stages of concern identified through the work of Hord, Rutherford, Huling-Austin, and Hall (1987). Hord, et al state that research has identified seven stages of concern that users, or potential users, of an innovation may have.

These include:
- Stage 0 - Awareness Concerns
- Stage 1 - Informational Concerns
- Stage 2 - Personal Concerns
- Stage 3 - Management Concerns
- Stage 4 - Consequence Concerns
- Stage 5 - Collaboration Concerns
- Stage 6 - Refocusing Concerns

The CFSoCQ requires respondents to indicate what they think about a specific innovation by marking each of 35 items on a 0 to 7 Likert scale according to how accurately the items describe the respondent's current feeling about any innovation (in this case inclusion). The 35 items represent seven stages of concern, five items for each stage. Raw scores for each stage of concern are converted to percentile scores and arrayed on a stages of concern profile. The data are then analyzed to determine the overall concerns toward the particular innovation and what differences in concerns appear.

This instrument could prove of benefit to others interested in examining concerns they may face when involved in the process of implementing new innovative ideas or planned change in their organization.

References

Bennis, W. & Nanus, B. (1985). Leaders: The strategies for taking charge. New York: Harper & Row.

Blumberg, A. (1985). The school superintendent, living with conflict. New York: Columbia University, Teachers College Press.

Change Facilitators Concerns Questionnaire, Research and Development Center for Teacher Education, The University of Texas at Austin, Copyright 1980.

Deal, T.E. & Peterson, K.D. (1990). The principal's role in shaping school culture. Washington, DC: United State Department of Education.

Drucker, P. (1977). An introductory view of management. New York: Harper's College Press.

Hall, G.E., Newlove, B.W., George, A.A., Rutherford, W.L., & Hord, S.M. (1991). Measuring Change Facilitator Stages of Concern, A Manual for Use of the CFSoC Questionnaire. Colorado: Center for Research on Teaching and Learning.

Hill, F.W. (1993). Inclusion and the administrative structure. American Schools and Universities, 66, 20.

Hord, S.M., Rutherford, W.L., Huling-Austin, L.L., & Hall, G.E. (1987). Taking charge of change. Alexandria, VA: Association for Supervision and Curriculum Development.

Kelly, J. (1974). Organization behavior: Its data, first principles and applications (3rd ed.) Homewood, IL: Richard Irwin, Inc.

Koontz, H, O'Donnell, C.D., Weihrich, H. (1986). Essentials of management (4th ed.). New York: McGraw-Hill.

Kouzes, J.M. & Posner, B.Z. (1987). The leadership challenge: How to get extraordinary things done in organizations. San Francisco: Jossey-Bass.

Thousand, J.S. and Villa, R.A. (1990). Strategies for educating learners with severe disabilities within their local home schools and communities. Focus on Exceptional Children, 23, 1-24.

Usdan, M.D. (1994). The relationship between school boards and general purpose government. Phi delta Kappan, 75, 374-377.

Wills, F.G. & Peterson, K.D. (1992). External pressures for reform and strategy formation at the district level: Superintendents' interpretations of state demands. Educational Evaluation and Policy Analysis, 14, 241-260.

Joan P. Sebastian
Connie Mathot-Buckner
Department of Special Education
University of Utah
Salt Lake City, UT 84112

INCLUDING STUDENTS WITH SEVERE DISABILITIES IN RURAL MIDDLE AND HIGH SCHOOL: PERCEPTIONS OF CLASSROOM TEACHERS

Introduction

The movement toward inclusive educational programs for students with severe disabilities has gained broad support in recent years (ARC, 1995; NASBE, 1992;). A significant number of research studies have suggested that these programs promote important educational and social outcomes for both students with disabilities and their peers without disabilities (Halvorsen & Sailor, 1990; Giangreco & Putnam, 1991; Snell, 1990). Unfortunately, the preponderance of research in this area has focused on elementary age students and on the restructuring of elementary schools to accommodate the needs of diverse learners including those with disabilities (Stainback & Stainback, 1996). With a few exceptions (i.e., Falvey, 1996; Jorgensen, 1996; McDonnell, Mathot-Buckner, & Ferguson, 1996; Schnorr, 1997), little attention has been paid toward the inclusion of older students in their neighborhood schools and in general education classes.

Additionally, research that documents the effects of including secondary students with severe disabilities in rural middle and high schools is limited. Rural secondary educators struggle with unique issues, particularly in terms of resources and support for diverse students. This study will describe how rural educators perceive the inclusion of students with severe disabilities and what they have learned as they have attempted to include these students.

Washington School District, in the southern part of the state of Utah, has for several years served students with severe disabilities in inclusive elementary neighborhood schools. Recently, district administrators decided to begin including students with severe disabilities in the middle and high school programs. This district includes both suburban and rural schools. Data for this paper comes from the first year of implementing an inclusive program for students with severe disabilities in a rural middle school and high school. The purpose of the study was to examine the effects of this change in service delivery for students with severe disabilities. Specifically, researchers sought to answer the following questions: 1) What do secondary educators believe about including students with moderate or severe disabilities in secondary schools and content areas classrooms? 2) How is instructional practice impacted when students with severe disabilities are included into secondary school programs? and 3) What can we learn from educators who are learning to include students with severe disabilities?

Method

Study site description. The study was conducted in Washington School district located in a rural area of a Utah. The district had a total enrollment of 16,650 students. The school district served students who resided in several communities ranging in size from a very small town of 250 to a rapidly growing community of 42,000. Although located in a rural area, the school district has been experiencing significant growth in recent years due to individuals relocating from larger urban areas within and outside of the state.

Secondary students with severe disabilities in this school district were served in traditional self-contained special education programs with a community-based focus. In 1993, district administrators decided to begin including students with severe disabilities in secondary schools. These efforts were again supported in part by two federally funded projects designed to provide teachers and administrators in these schools with training and on-going technical assistance. A senior high school and a middle school participated in the study. These schools were selected because they were just beginning to include students with severe disabilities. 673 students are enrolled in the rural middle school, including 6 students with severe disabilities, while 629 students attend the rural high school with 2 students with severe disabilities enrolled at the school.

During the study period, eight students with severe disabilities included in these two rural schools. IQ scores for the students ranged from "untestable" to 53. Students varied in their ability to communicate, from one student who was non-verbal to another who used three and four word utterances. All of the students spent part of the school day in content area classes and the remainder of the time in self contained classrooms or in a community based setting. Students were included in the following content classrooms: art, PE, drama, health, choir, shop and home economics. The amount of time spent in general education classes ranged from 17% to 72%. Assignment to classes was based on student interest and need. Some of the students were also receiving vocational training as well as personal management and leisure training in the community.

Study participants. Selection of study participants followed what Goetz and LeCompte (1984) describe as criterion based selection procedures. Individuals were selected because of their involvement with students with severe disabilities either in the classroom or within the school program at large. A total of ten educators from each school were identified to participate in the study. Six content area teachers in each school were selected; three of the teachers had students with severe disabilities in their content classes and the other three teachers would be including students later in the school year. The building principal, a school counselor and two special education teachers were also identified from each school to participate in the interviews.

Study procedures. Structured interviews were conducted with study participants in the fall and spring of 1995/96. An interview protocol was developed using the research questions as a general outline. Within each of the four basic question areas (i.e., attitudes about inclusion, impact on students, effects on teaching practice, and needed supports), specific questions were created to elicit from participants their perceptions about and actual experiences with students with severe disabilities in the school and general education classes. Interviews took place by appointment and averaged 45 minutes for each participant. Interviews were tape recorded with the permission of each participant and transcribed later for analysis.

Data analysis. Once the interviews were completed and transcribed, the researchers met to identify initial analysis codes (Bogdan & Biklen, 1992). Analysis codes for discrete responses in each question area were defined. The research team worked together on one transcribed interview in order to clarify the analysis codes and insure that the definitions were clear.

Following the development of the analysis codes, the researchers identified relevant themes in the data. Each team member read all of the transcripts for each school and compared their coding of the participants responses, with those scored by the other team member, in order to ensure the consistency of code assignment. Periodically during the analysis phase of the study, the researchers met to clarify the analysis codes and discuss emergent themes. Each researcher developed a written theme analysis for both the fall and spring interviews for each of the participating schools. Examples of participants' responses were selected to illustrate themes and patterns in the data. Using cross case and within case comparison strategies, a thematic framework emerged that provided insight into how educators perceived and experienced the inclusion of students with severe disabilities.

Findings

Within each of the four question areas several themes emerged. The following are highlights of themes illustrating educators' perceptions and experiences in each of the question areas for both the fall and spring interviews. Generally, participants' beliefs and attitudes about inclusion changed very little from the initial interviews conducted in the fall of the school year. Because participants had the opportunity to observe and work directly with students with severe disabilities, the spring interviews contained many stories about included students and examples of instructional strategies. Changes in perceptions and experiences from fall to spring are noted in each of the theme areas.

Perceptions about inclusion. Participants initial beliefs that including students with severe disabilities was the right thing to do, were validated by actual experiences with students during the first year of implementation. Class size and the tendency to focus on the group rather than individuals remained challenges for many teachers. Participants also felt that they needed support from the special education staff to help with students in the classroom.

Benefits for students. In the fall interviews, content area teachers were able to speculate in general terms about the advantages of inclusion for students with and without disabilities, while the special educators were able to describe specific examples of benefits for students with severe disabilities. A few teachers identified concerns regarding the actual benefits to students with and without disabilities in content area classes. These initial concerns were less of an issue during the spring interviews. Participants shared multiple examples of students with disabilities achieving in their classrooms academically, socially and behaviorally. Participants reported that students without disabilities grew in their overall acceptance and tolerance of students with disabilities.

Effects of inclusion on teaching. During the fall interviews participants questioned how they would accommodate students with severe disabilities in their content area classrooms. Teachers were concerned about the numbers of students they already had to work with, how much time it might take to create lessons for these students, and how they would grade the students with more severe disabilities. The spring interviews included many examples of how teachers had successfully accommodated for the students. It seems that when actually confronted with the students in a classroom, teachers were able to utilize creative and resourceful strategies for reaching these new students. Co-teaching, effective use of peer tutors, and sensitivity to each student's unique growth were some of the successful strategies implemented by these teachers. Grading the students with severe disabilities and awarding credit for student performance on modified tasks continued to be a concern for the teachers. Even though each of the students with disabilities had a written Individual Educational Program (IEP) in place, content area teachers seemed unaware of the goals and objectives in those documents and how that might relate to what was happening in their classrooms.

Training and technical assistance. Participants identified both internal and external kinds of support needed for including students with severe disabilities in secondary school settings. Teacher preparation or inservice, technical assistance specific to each student's needs, and collaboration among educators were examples of how inclusion was supported internally within each school. Funding from the district to hire additional help and purchase needed equipment was seen as external support for inclusive education. This external support from the district office was viewed as critical to the overall success of inclusion in the district.

The kinds of support and training suggested by participants in the spring were more specific because teachers had actual experiences including students. Communication with special education personnel was viewed as important for the success of inclusion in the school. Not only did communication among educators occur more frequently, but it became more collaborative with the sharing of strategies among teachers. In the high school, co-teaching approaches were implemented in content area classrooms. External resources particularly to support additional personnel, technology and materials were viewed as important, especially if inclusion was to continue in the school district.

Discussion

The goal of this study was to obtain information from rural secondary educators about their perceptions and experiences related to including students with severe disabilities in neighborhood schools and content area classes. The authors interviewed middle and high school teachers in the fall as they began including students with severe disabilities. Secondary educators were asked to discuss their beliefs about inclusion, the outcomes they anticipated for students, how they felt an inclusive program would impact their teaching practice, and what was needed in order to include students with severe disabilities successfully. In the spring, following the first year of including students with moderate and severe disabilities, the authors interviewed study participants again, this time focusing on their experiences.

Almost all of the educators in this study believed that students with moderate and severe disabilities should be included in their secondary neighborhood schools. General educators teaching in content areas were also willing to include students with severe disabilities in their classrooms, but most felt unprepared to work with these students. This finding is consistent with the findings of several other studies (Bradley & West, 1994; Scruggs & Mastropieri, 1996) and also suggests that many secondary educators when provided adequate support and training are open to the idea of including students with more severe disabilities. The educators we talked with described how they included students and suggested several strategies that would help to create successful inclusive learning environments for all students.

Class size is frequently identified as a barrier to successful inclusion (Scruggs & Mastropieri, 1996) Many teachers in this study worried that because of the large numbers of students in their classrooms, they would be unable to meet the needs of students with severe disabilities. A few teachers felt that including students with severe disabilities in their already large classes would take time and attention away from the students without disabilities.

Teachers were also concerned about the amount of time it would take to plan for students with severe disabilities. It is evident that arranging the school schedule to allow time for educators to meet collaboratively to plan curricular adaptations for students with severe disabilities is critical for successful inclusion. As others have noted, structuring the school schedule to allow for planning time appears to be an important organizational strategy to support change of any kind (Fullan, 1993; Stainback & Stainback, 1996).

Study participants recognized several positive outcomes for students with and without disabilities. Teachers reported that students without disabilities grew in their understanding and tolerance of differences. Teachers also believed that the educational program of students without disabilities had not been adversely affected by inclusion. Students with severe disabilities grew in social skills and specific knowledge according to content area teachers and special educators. But as noted by others, the assignment of grades and credit for their classroom performance continued as a dilemma for many general educators (Bradley & West, 1994; York, Vandercook, MacDonald, Heise-Neff, & Caughey, 1992).

Study participants identified informational needs and instructional strategies they felt would help them be more successful with students with severe disabilities. Teachers wanted more specific information about individual students' needs and abilities. Teachers in this study, as in a recent study by Downing, Eichinger, and Williams (1997) also recognized the importance of the support they received from special educators, para-professionals and peer tutors. Collaborative efforts among educators in these schools were also seen as positive and critical to the success of inclusion. Additionally, these educators identified as important the need for training in specific curriculum adaptations and instructional strategies as well as appropriate ways to measure learning.

This study was limited in that it examined the reported perceptions and experiences of secondary educators who included students with moderate and severe disabilities in their classrooms. Classroom observations and specific student data were not collected as part of this research. Although, the results of this study compare positively to the research of others (Bradley & West, 1994; Scruggs & Mastropieri, 1996; York, et al., 1992): readers are cautioned that the findings from this study are limited to one school district in a specific region of the country.

The findings from this study suggest that the rural secondary educators in these schools were willing to include students with severe disabilities in content area classrooms. Future research in secondary schools including students with severe disabilities, particularly those in rural communities, should identify the strategies implemented in content area classes that promote learning for all students. Careful documentation of successful instructional approaches would add to a growing body of research that provides educators with an array of strategies for teaching all students in the diverse classrooms of today schools.

References

The ARC. (1995). 1995 Report card on inclusion in education of students with mental retardation. Arlington, TX: The ARC.

Bogdan, R. C. & Biklen, S. K. (1992). Qualitative research for education. An introduction to theory and methods. (2nd ed.) Boston: Allyn and Bacon.

Bradley, D. F., & West, F. (1994). Staff training for the inclusion of students with disabilities: Visions from school-based educators. Teacher Education and Special Education, 17 (2), 117-128.

Downing, J. E., Eichinger, J, & Williams, L. J. (1997). Inclusive education for students with severe disabilities Comparative views of principals and educators at different levels of implementation. Remedial and Special Education, 18, (3) 133-142.

Falvey, M. A., (1996). Inclusive and heterogeneous schooling: Assessment, curriculum, and instruction. Baltimore: Paul H. Brookes.

Fullan, M. (1993). Change forces: Probing the depths of educational reform. London: The Falmer Press.

Goetz, J. P., & LeCompte, M. D. (1984). Ethnography and qualitative design in educational research. San Diego: Academic Press.

Giangreco, M. F., & Putnam, J. (1991). Supporting the education of students with severe disabilities in regular education environments. In L. H. Meyer, C. A. Peck, & L. Brown (Eds.), Critical issues in the lives of people with severe disabilities (pp. 245-270). Baltimore: Paul H. Brookes.

Halvorsen, A. T., & Sailor, W. (1990). Integration of students with severe and profound disabilities. In R. Gaylord-Ross (Ed.), Issues and research in special education (pp. 110-172). New York: Teachers College Press.

Jorgensen, C. (1996). Designing inclusive curricula right from the start: Practical strategies and examples for the high school classroom. In S. Stainback & W. Stainback (Eds.), Inclusion: A guide for educators (pp. 221-236). Baltimore: Paul H. Brookes.

McDonnell, J., Mathot-Buckner, C., & Ferguson, B. (1996). Transition programs for students with moderate/severe disabilities. Pacific Grove, CA: Brooks/Cole.

National Association of School Board of Education (1992). Winners all: A call for inclusive schools. Alexandria, VA: NASBE Publications

Sailor, W. (1991). Special education in the restructured school. Remedial and Special Education, 12, 8-22.

Schnorr, R. F. (1997). From enrollment to membership: "Belonging" in middle and high school classes. Journal of the Association of Persons with Severe Handicaps, 22, (1), 1-15.

Scruggs, T. E. & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. Exceptional Children, 63 , (1), 50-74.

Snell, M. E. (1990). Schools are for all kids: The importance of integration for students with severe disabilities and their peers. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), The regular education initiative: Alternative perspectives on concepts, issues, and models (pp. 133-149). Sycamore, IL: Sycamore Publishing.

Stainback S., & Stainback, W. (Eds) (1996). Inclusion: A guide for educators. Baltimore: Paul H. Brookes.

York J., Vandercook, T., MacDonald, C., Heise-Neff, C., & Caughey, E. (1992). Feedback about integrating middle-school students with severe disabilities in general education classes. Exceptional Children, 58, 244-258.

Robert L. Morgan
Indiana Wesleyan University
Marion, IN

James E. Whorton
University of Southern Mississippi
Hattiesburg, MS

Patricia A. Cruzeiro
Chadron State College
Chadron, NE

Who's in Charge Here?
Leadership in Rural Special Education

Schools continue to place learners with disabilities in the general education classroom and provide special education services in that environment. This trend developed from shifts in both general and special education. Both promote the provision of an individualized education to all learners, including those with disabilities in the typical classroom environment. Principals are integral in making this and other change work. Effective schools research reveals the importance of leadership at the local school level (Campbell, Cunningham, Nystrand, & Usdan, 1990). Furthermore, recent legislation and litigation continue to place more responsibility on the principal. This is particularly true in special education.

Principals are the keys to make special education succeed or fail (Smith, & Colon, 1998). This and other site level responsibilities challenge the constantly increasing role of the school administrator (Williams, & Katsiyannis, 1998). How can principals demonstrate leadership in this area? What do principals currently do? The results of a survey examine these responsibilities and the principal's role in special education leadership.

Method

The subjects for this pilot study were principals of small rural schools of Nebraska, South Dakota, and Wyoming. Each respondent completed a survey developed and sent by the investigators. If subjects failed to return the survey, the principals received a follow-up letter and survey. The subjects returned the survey and the investigators analyzed the obtained data. In addition to a number of demographic queries, the investigators asked respondents to pen their agreement or disagreement to indicators of special education leadership roles (Billingsley, Farley, & Rude, 1993). Response statements on the survey included:

	Response Statement
S1.	I communicate to building level staff that the education of learners with disabilities is a shared responsibility.
S2.	I provide clear direction and support to faculty and staff regarding the philosophy, goals, and expectations for providing instruction and services to learners with disabilities.
S3.	I provide opportunities for meaningful parent and family involvement in the education of learners with disabilities.
S4.	I facilitate the coordination of programs and services between school staff and community and interagency groups.
S5.	I encourage all who are involved with the learner with disabilities to actively participate in the IEP process.

S6. I provide assistance in IEP development, implementation, and evaluation.
S7. I assist with curriculum development and/or modification.
S8. I assist with identifying appropriate instructional strategies and resources.
S9. I help organize and arrange space/materials for modifying instruction.
S10. I help translate individual learner objectives into daily lesson plans.
S11. I encourage the use of various innovations to improve instruction, including technology.
S12. I provide ongoing support for and assistance with inclusion efforts.
S13. I encourage students with disabilities to participate in all school activities.
S14. I assist with developing and implementing classroom interventions to help at-risk students.
S15. I assess the existing behavior management system and makes changes based on student needs and current educational programs.
S16. I foster the development of positive, responsible student behavior.
S17. I guide school personnel in implementing behavior management strategies to produce more supportive, instructional, and preventative behavior management programs.
S18. I plan and implement transition services for students (e.g., from pre-school to elementary, from elementary to middle school, from secondary schools to world or work, post-secondary education).
S19. I plan and deliver goals, objectives, instruction, and related services within an outcome-oriented process.
S20. I involve students in transition planning.
S21. I promote collaboration among transition service providers within the school and with outside agencies.
S22. I assist in developing strategies for including a transition component into the student's IEP (individualized education program).
S23. I ensure that students with disabilities receive high-quality transition planning and transition services that meet their individual needs and interests.
S24. I help teachers interpret and use assessment data that measure progress toward curricular goals and objectives (curriculum-based assessment).
S25. I provide frequent monitoring of students' progress.
S26. I involve teachers in evaluating the effectiveness of special programs.
S27. I use evaluation results to make informed program decisions.
S28. I provide opportunities for collaborative planning of staff development activities.
S29. I evaluate the usefulness of information or skills presented in staff development sessions.
S30. I provide opportunities to apply, practice, and reflect on skills presented in staff development sessions.
S31. I encourage teacher involvement in activities for professional growth.
S32. I provide incentives to encourage personal and professional growth.
S33. I provide ongoing support and assistance to beginning teachers.
S34. I acknowledge teachers' and other staff members' efforts.
S35. I communicate confidence and respect for teachers and all other staff.
S36. I encourage shared decision making in the planning, implementation, and evaluation of programs for students with disabilities.
S37. I provide opportunities for regular and special teachers to observe students taught by each other.
S38. I provide opportunities for teachers and related services personnel to learn, solve problems, and interact in small groups or teams.
S39. I evaluate and modify school-based consultation programs.
S40. I schedule frequent observations for improving instructional effectiveness.
S41. I schedule conferences following observations to analyze and discuss instruction.
S42. I evaluate teachers using clearly defined criteria.

Adapted from Billingsley, Farley, & Rude (1993)

Results

One hundred fifty-five administrators responded to this questionnaire. The total number of responses to any given item rarely equaled 155. It was not unusual for an occasional item to be unanswered. Although all respondents were principals of rural schools, Table 1 highlights their assigned primary duties.

Table 1
Administrative Positions of Participants

Administrative Position	Frequency	Percent
Elementary	60	40.3
Secondary	44	29.5
Combined Elementary Secondary	13	8.7
Central Office	4	2.7
Other	28	18.8
Total	149	100.0

Thirty-seven (25%) respondents reported "yes" when asked if they were principal for more than one attendance center, while 111 (75%) responded "no." The respondents were a diverse group of people. Table 2 shows the wide variety of background and training of each. There were 42 females (28.2%)and 107 males (71.8%). Their ages ranged from 28 to 75 years, with an average of 45 years. There was a wide range in terms of years of professional experience; the average was 22.4 years, with a minimum of 3 and a maximum of 42. They also worked in schools with a wide range of student population. Table 3 identifies the background in special education of the responding principals. Rural school populations ranged from a minimum of 20 to a maximum of 950; the average was 284. One demographic item addressed

Table 2
Administrative Position by Highest Degree

Administrative Position	Bachelors	Masters	Specialist	Doctoral	Other	Total
Elementary	6	18	6	5	20	55
Secondary	15	14	4	4	4	41
Combined Elementary Secondary	1	5	3	1	2	12
Central Office	1	3	4	-	-	-
Other	8	6	4	2	8	28
Total	31	46	17	12	34	140

Table 3
Position and Number of Special Education Courses Completed

Administrative Position	One	Two	Three	Four	Five	Total
Elementary	6	18	6	5	20	57
Secondary	15	14	4	4	4	41
Combined Elementary Secondary	1	5	3	1	2	12
Central Office	1	3				4
Other	8	6	4	2	8	28
Total	31	46	17	12	34	142

attendance centers. When asked, "What percentage of time is spent on regular education tasks and special education tasks?" the respondents indicated that an average of 79% (range: 15 to 98) of their time was spent of regular education and 21% (range: 2-85) was spent on special education. Of that time, the responding principals dispersed their time in a variety of ways as seen in Table 4. It should be noted that because of the number of activities and the large number of participants reporting, the total amount of time exceeds 100%. The principals responded to each questionnaire using a Likert-type scale. A response of 1 equated to strongly agree, 3 was neutral, and 5 indicated strongly disagree. Table 5 highlights the mean responses of the principals to each statement.

Table 4
Percent of Time in Selected Activities

Activity	N	% of time
Program Development	142	13.0
Personnel Issues	143	16.5
School Management/Budget	142	20.5
Student Activities	140	12.5
District Office	137	8.5
Community	134	5.3
Planning	139	6.2
Professional Development	141	6.2
Student Behavior Management	145	14.6

Discussion

The purpose of this research was to gather information about the ways in which principals administer special education programs in their building. The investigators found the rural principals who responded incorporated learners with disabilities within the listed leadership functions. To make special education and affected students part of a unified educational system, the principal needs to communicate this mission, manage curriculum and instruction, supervise both regular and special teaching, monitor all students' progress, and promote a positive and accepting instructional climate (Krug, 1993). To respond to this increasingly diverse student

Table 4
Descriptive Statistics for Questionnaire Items

Item Number	Number	Minimum	Maximum	Mean	Standard Deviation
S1	153	1.00	5.00	1.8758	1.0280
S2	153	1.00	5.00	2.2092	0.9911
S3	153	1.00	5.00	2.4248	1.0368
S4	150	1.00	5.00	2.8333	1.0582
S5	153	1.00	5.00	1.9477	1.1573
S6	153	1.00	5.00	2.2680	1.0761
S7	152	1.00	5.00	2.4539	1.0411
S8	151	1.00	5.00	2.6556	1.0003
S9	153	1.00	5.00	2.5490	1.0256
S10	148	1.00	5.00	3.5676	1.0952
S11	153	1.00	5.00	2.2157	1.0447
S12	153	1.00	5.00	2.1765	1.1009
S13	153	1.00	5.00	2.0065	1.0791
S14	152	1.00	5.00	2.4013	0.9368
S15	150	1.00	5.00	2.4467	0.9521
S16	152	1.00	5.00	1.8816	1.0792
S17	150	1.00	5.00	2.2067	1.0252
S18	149	1.00	5.00	2.8792	1.0261
S19	148	1.00	5.00	3.0676	0.9452
S20	147	1.00	5.00	3.0340	1.0880
S21	147	1.00	5.00	2.7551	1.0637
S22	148	1.00	5.00	2.8986	1.0416
S23	145	1.00	5.00	2.6414	1.0184
S24	147	1.00	5.00	2.8163	1.0855
S25	149	1.00	5.00	2.6309	1.0613
S26	148	1.00	5.00	2.4122	0.9471
S27	147	1.00	5.00	2.4218	0.8984
S28	150	1.00	5.00	2.3600	0.9069
S29	148	1.00	5.00	2.5270	0.8366
S30	148	1.00	5.00	2.5405	0.8196
S31	154	1.00	5.00	1.9091	1.1047
S32	149	1.00	5.00	2.3557	1.1215
S33	153	1.00	5.00	2.0000	1.0131
S34	150	1.00	5.00	1.9133	1.0802
S35	152	1.00	5.00	1.8158	1.0637
S36	153	1.00	5.00	1.9804	0.9765
S37	150	1.00	5.00	2.5867	1.0503
S38	150	1.00	5.00	2.4800	0.9812
S39	141	1.00	5.00	3.0426	0.9552
S40	150	1.00	5.00	2.5667	1.0194
S41	151	1.00	5.00	2.2053	1.0540
S42	151	1.00	5.00	2.0331	1.0094

population, principals need to facilitate collaborative planning and problem-solving between general and special education professionals, and family members (Williams, & Katsiyannis, 1998). Inclusionary schools occur through purposeful leadership and the principal is the key to lead others through this process of change (Parker, & Day, 1997). Integrating special education in the total school community is difficult. Johnson (1998) provides guidelines for evaluating principals who share special education program management and leadership responsibilities. These 16 tasks and 37 competencies offer principals an outline to evaluate their responsibilities. Barriers are many and include administrative constraints, teacher preparation, funding patterns, and governmental regulations. In rural communities, additional barriers involve resistance to change, economic challenges, and geographic challenges. The administrator who sees special education as an opportunity will have fewer problems and a high rate of success (Smith, & Colon, 1998). Based on the obtained results, principals in Nebraska, South Dakota, and Wyoming are facilitating this change. Although the results focus on these states, results are readily generalizable to other western states and other rural settings.

References

Billingsley, B.S., Farley, M., & Rude, H.A. (1993). A conceptual framework for program leadership in the education of students with disabilities. In B.S. Billingsley (Ed.), Program Leadership for Serving Students with Disabilities (pp. 1-20). Richmond, VA: Commonwealth of Virginia Department of Education.

Campbell, R.F., Cunningham, L.L., Nystrand, R.O., & Usdan, M.D. (1990). The organization and control of American schools. Columbus, OH: Merrill Publishing Company.

DeYoung, A.J. (Ed.). (1991). Rural education issues and practice. New York, NY: Garland Publishing, Incorporated.

Johnson, L.R. (1998). Performance evaluation of special education administrators: Considerations and recommendations. The National Association of Secondary School Principals, 82, 24-32.

Krug, S.E. (1993). Leadership craft and the crafting of school leaders. Phi Delta Kappan, 3, 83-89.

Smith, J.O., & Colon, R.J. (1998). Legal responsibilities toward students with disabilities: What every administrator should know. The National Association of Secondary School Principals, 82, 40-53.

Williams, B.T., & Katsiyannis, A. (1998). The 1997 IDEA ammendments: Implications for school principals. The National Association of Secondary School Principals, 82, 12-18.

Ysseldyke, J.E., Algozzine, B., & Thurlow, M.L. (1992). Critical issues in special education. Geneva, IL: Houghton Mifflin Company.

David J. Lasseter
Diane Lea Ryndak
University of Florida
Gainesville, Florida 32611

A DISCUSSION OF THE ROLES OF INSTITUTIONS OF HIGHER EDUCATION IN MEETING THE NEEDS OF SCHOOLS IN RURAL AREAS

Though there is no agreement on either the definition of a rural area or the number of schools in rural areas, there is consensus that schools in rural areas have difficulty recruiting and retaining qualified teachers (Gold, Russell, & Williams, 1993; Lemke, 1994; Ludlow, 1996; Merrell, et al., 1994; Savelsbergh, 1995; Williams, Gold, & Russell, 1995). Schools in rural areas have responded to the needs of children with disabilities in various ways, including the: (a) use of itinerant teachers (Luckner & Miller, 1994); (b) formation of educational cooperatives (Rojewski, 1990); and (c) formation of partnerships with businesses and individuals in the community (Lemke, 1994; Ludlow, 1996; Rojewski, 1990). Each of these solutions has accompanying problems associated with it. For instance, in relation to providing itinerant services, certified teachers spend a great deal of time traveling between schools and students on their case load (Luckner & Miller, 1994), and experience logistical problems with materials, space, and scheduling (Ludlow, Bloom, & Wienke, 1990; Morsink & Lenk, 1992).

Regardless of the strategy used by schools to serve students with disabilities, institutions of higher education have attempted to respond to the personnel needs of schools in rural areas in numerous ways: (a) using a teacher education model that requires faculty to travel to remote sites where preservice students have gathered from rural areas for courses needed for certification (Ludlow, et al., 1990; Merrell, et al., 1994; Savelsbergh, 1995); (b) developing alternative certification programs (Sindelar, 1995; Zumwalt, 1991); and (c) implementing distance education programs through the use of technology (Bowden, 1994; Ludlow, 1996; Lundin, 1994; Shrestha & Sutphin, 1995-96; Williams, et al., 1995).

No matter which method of service delivery a university chooses to meet the teacher shortage problems faced in rural areas, teacher education programs must be comprised of faculty who have the expertise required both in the use of instructional methods employed in the program (i.e., high technology distance education; collaboration with local personnel) and in specific areas of expertise in special education and teacher education. In addition, teacher education programs may need to (a) target preservice students from rural areas (Gold, et al., 1993; Starlings, Wheeler, & Porterfield, 1994); and (b) address the unique needs of teachers in rural areas (Lemke, 1994; Luckner & Miller, 1994; McLaughlin, Valdivieso, Spence, & Fuller, 1988; Williams, Gold, & Russell, 1991). One measure of whether teacher education programs are addressing the need for teachers in rural areas is the extent to which these needs are mentioned in advertisements for faculty at institutions of higher education. The purpose of this study was to analyze advertisements for special education tenure track assistant professor positions for mention of expertise in the provision of educational services in rural areas as being either required of the successful applicant or addressed by the teacher education program. In addition, the content of advertisements was analyzed for other major descriptors of the successful applicant and program to provide a profile of positions that addressed teacher education needs in rural areas.

Method

Advertisements in the Chronicle of Higher Education for the 1994-95 and 1995-96 academic years were analyzed. Academic years were defined as starting August 1 and ending July 31, correlating with the time frame during which prospective faculty members most likely would be seeking a position for the following academic year. Advertisements which specified that the successful applicant not be required to have a terminal degree were discarded, as well as those positions which were advertised as temporary, grant funded, or part time.

Analysis of advertisements was conducted in two major areas. First, the analysis addressed characteristics of the teacher education program for which the faculty member was being recruited. Second, the analysis addressed the descriptors used to characterize the successful applicant. For this study, areas of descriptors included: (a) disability category (e.g., mental retardation; multiple disabilities); (b) level of disability; (c) age-related expertise; (d) other areas of expertise; (e) focus on school setting; (f) rural and urban personnel needs; (g) collaboration among special and general education faculty; (h) presence of a unified teacher education program; (i) provision of educational services in inclusive settings; and (j) collaboration with schools. Advertisements were analyzed independently twice and results from these analyses were compared. Any discrepancies which occurred were addressed and consensus reached.

Results

During the 1994-95 academic year, 195 advertisements for assistant professors in special education appeared in the Chronicle of Higher Education. Of these advertisements, eight (4.0%) specified that the successful candidate should have expertise in either rural or urban education settings (see Table 1). Two advertisements required rural education expertise, while six advertisements required expertise in urban education settings. During the 1995-96 academic year, 202 advertisements for assistant professors in special education appeared. Of these advertisements, 20 (9.9%) required the applicant to have a successful background in rural or urban education settings. Four of the advertisements specifically required educational expertise in rural settings, while 16 required educational expertise in urban settings. Combining the academic years of 1994-95 and 1995-96, 28 (7%) of the advertisements (n=397) specifically required the successful candidate to have expertise in either rural settings (n=6, 1.51%) or urban settings (n=22, 5.54%).

Of the identified two advertisements in academic year 1994-95 which specified a rural education expertise component, both used other descriptors for the successful applicant. One included the descriptor of mild/moderate disability level, and the other included the descriptor of emotional disturbance as a category of disability.

The four advertisements identified as containing a rural education expertise component during the academic year 1995-96 also included additional descriptors for the successful applicant. One included emotional disturbance as a category of disability alone; two included only age-related expertise (i.e., one in infant/early childhood special education and one in secondary/transition); and one included mental retardation and secondary/transition expertise.

Overall, six advertisements for both years included teacher education needs in rural settings. Of these, one (16.67%) described the successful candidate as having additional expertise in level of disability (mild/moderate). Two (66.67%) had an additional descriptor of expertise in a category of disability, and two mentioned age-related expertise (33.33%).

BEST COPY AVAILABLE

Both category of disability and age-related expertise were mentioned as additional areas of expertise in two (33.33%) of the advertisements.

For the time period examined, no advertisements indicated a preference for other areas of expertise such as general education, generic special education, or bi-lingual special education. In each academic year, one advertisement required expertise in diverse populations. In academic year 1994-95, distance education through the use of technology was not addressed in conjunction with rural special education expertise. During academic year 1995-96, three (75%) of the advertisements included descriptors for the use of technology in distance education, one advertisement included the use of technology in the area of expertise (25%), and one advertisement (25%) required knowledge of e-mail technology (see Table 2).

In relation to strategies to meet teacher education needs in rural settings, 10 advertisements (5.13%) included descriptors related to remote site instruction during academic year 1994-95 while 11 of the advertisements (5.45%) from academic year 1995-96 contained these descriptors (see Table 3). Only one advertisement (0.50%) included a descriptor related to an alternative certification program for academic year 1995-96. No such descriptors were included in advertisements for academic year 1994-95. Distance education using technology was included as a descriptor in 7 (3.59%) of the advertisements for academic year 1994-95, with the number increasing to 11 (5.45%) for academic year 1995-96.

During the academic year 1994-95, two (100%) of the advertisements that required expertise in preparing personnel to work in rural special education settings included a descriptor related to the provision of educational services in inclusive settings as well as collaboration with schools (see Table 4). While academic year 1995-96 evidenced an increase in the number of advertisements incorporating expertise in rural special education (n=4), there was a decrease in the number of advertisements that required expertise in inclusion (1; 25%), and collaboration with schools (1; 25%). When advertisements for the two academic years were combined (n=6), three (50%) included a descriptor about inclusion, while two (33.33%) incorporated collaboration with schools.

Discussion

Although the results of this study present a clear snapshot of the lack of emphasis on meeting teacher education needs in rural areas, it must be noted that there are several limitations in the present study and in the manner in which the findings can be interpreted. First, while advertisements for new faculty in teacher education programs were analyzed, the actual programs were not reviewed. Because of this, conclusions cannot be drawn about the extent to which teacher education programs actually address the needs of rural areas; conclusions can only be drawn about the manner in which advertisements address these concerns. Future researchers may investigate teacher education programs to determine whether they meet the needs of rural areas. Second, no additional information about the advertised positions or the teacher education programs which may have been obtained by potential applicants via verbal or written communication, was obtained or reviewed. Since information initially available to potential applicants in advertisements was analyzed, no information from individuals who developed the advertisements, or the teacher education program faculty, was analyzed. Because of this limitation, no conclusions can be drawn about the degree to which the content of the advertisements match either the actual requirements of the anticipated successful applicant, or the program's emphasis on meeting the teacher education needs in rural areas. A final limitation to the study is the lack of information about the new faculty members who successfully applied for the positions advertised. Because of this, no conclusions can be drawn related to the match between the content of advertisements and the expertise of successful applicants. Further research is needed to address all of these limitations before any additional conclusions can be drawn.

In spite of these limitations, some issues are clear from the present descriptive study. Since 67% of schools nationally are in rural areas and there is a shortage of teachers in rural areas (Lemke, 1994), and the number of U. S. Office of Education initiative priorities that address needs related to education in rural areas, it is disconcerting that of the 397 advertisements for special education assistant professors appearing in the Chronicle of Higher Education (a) only six (1.51%) mentioned rural areas, (b) only 21 (5.29%) addressed teacher preparation at remote sites, (c) only 18 (4.53%) mentioned teacher preparation through distance education, and (d) only one (0.25%) discussed alternative certification programs. It is interesting to note that advertisements for only one institution of higher education mentioned both the needs of rural areas *and* either remote site instruction, alternative certification programs, or distance education, and that this institution consistently did so in three advertisements across both years.

Failure to include in faculty advertisements the expertise required to meet the teacher education needs of rural areas may reflect two situations. First, the advertisements may not accurately reflect all of the requirements for the successful candidate or all descriptors for the teacher education program; that is, positions that are advertised may actually require the successful candidate to have expertise, and an interest, in rural teacher education activities but the advertisements may not incorporate these concepts. This may be the result of many issues, including: (a) advertisements being developed by individuals who are not intimately involved with the teacher education program; (b) the teacher education faculties lacking consensus on or the knowledge of the degree to which needs in rural areas should be emphasized; or (c) the current faculties not wanting to limit the pool of applicants to only those with expertise in rural teacher education needs. In any of these situations, with the current emphasis on meeting teacher education needs in rural areas, institutions of higher education may want to consider including the *possibility* of the new faculty member participating in remote site instruction, alternative certification programs, or distance education programs in advertisements for new faculty. Even this minor mention of the *possibility* may encourage doctoral candidates to develop expertise in meeting the teacher education needs of rural areas, and leadership programs to facilitate the development of that expertise.

Second, advertisements actually may reflect all the requirements for the successful candidate and all descriptors for the teacher education program. If this is the case, various issues become evident. Most importantly, this could indicate that teacher education programs either: (a) are not systematically addressing the needs of rural areas; or (b) currently have faculty already meeting those needs and, therefore, are not seeking additional faculty with the same expertise. Given the continuing shortage of certified teachers in rural areas, it is difficult to accept the latter possibility without further research to support it. If the former possibility is the case, there may be several contributing factors. For instance, institutions of higher education may be hesitant to incorporate instruction in remote sites into their existing teacher education programs for viable logistical reasons: (a) the amount and expense of travel could be considered prohibitive; (b) faculty may be overextended in order to cover the courses already required on campus; (c) university systems dealing with faculty FTE and credit hour loads may not be adaptable to compensate faculty for the time required to travel to and from remote sites; or (d) stay overnight for multiple day classes.

In addition to logistics, institutions of higher education must be responsive to their mission, whether legislated by state governments or directed by separate boards of regents.

BEST COPY AVAILABLE

The traditional faculty responsibilities of providing service, conducting research, and teaching are made more complex when considering the role of teacher education programs. Most are charged with decreasing a state teacher shortage by preparing teachers to provide education services that reflect current best practices for school districts across the state, not just in rural areas. The mission of any institution of higher education may be so expansive that it prohibits a teacher education program from focusing on the needs of just one region of the state - in this case, schools in rural areas. Given the nation's current economic situation and the management concept of "do more with less" which is prevalent in many states today, the mission of many institutions of higher education is expanding in scope and becoming more encompassing, while resources are diminishing. In such a climate, specific issues which face schools in rural areas may be overlooked or the efforts to address these issues may be diluted. This especially may be true for states in which the number of student credit hours leading toward a degree have been limited by state legislatures or boards of regents, or in which institutions of higher education mainly are located in urban/suburban settings, limiting students' experiences in rural settings.

In relation to the development and provision of high tech distance education programs, institutions of higher education may lack the actual technology required for effective interactive video-conferencing and video-instructing. Even if the technology is available, institutions of higher education may lack the ability to financially support the faculty time required to develop distance education courses or learn how to use the technology effectively. In addition, some course content may not lend itself to effective instruction through distance education. Such content might include the practice of assessment, instruction, and collaboration techniques, all of which require observation in educational situations and individualized feedback. More information is needed related to the efficacy of distance education in preservice instruction.

If the advertisements provide an indication of the expertise required of successful candidates, then it can be inferred that little is being done to meet the unique teacher education needs of rural areas. A concerted effort must be made to address this situation. To support such efforts effectively, however, solutions must be found to address the barriers faced by institutions of higher education. Because of this, the quality of services for students with disabilities in rural areas warrants intensive investigation.

Table 1: Advertisements Listing Expertise in Preparing Special Education Teachers to Work in Rural or Urban Settings

	Rural		Urban		Total	Percent of Total Advertisements
Year 1 n = 195	2	1.03%	6	3.08%	8	4.10%
Year 2 n = 202	4	1.98%	16	7.92%	0	9.90%
Both Years N = 397	6	1.51%	22	5.54%	28	7.05%

BEST COPY AVAILABLE

Table 2: Additional Descriptors With Expertise in Preparing Teachers to Work in Rural Settings

	Year 1 n = 2		Year 2 n = 4		Both Years n = 6	
Other Areas of Expertise						
General education	0	0.00%	0	0.00%	0	0.00%
Generic special education	0	0.00%	0	0.00%	0	0.00%
Bi-Lingual special education	0	0.00%	0	0.00%	0	0.00%
Diverse populations	1	50.00%	1	25.00%	2	33.33%
Technology						
In teaching	0	0.00%	3	75.00%	3	50.00%
In area(s) of expertise	0	0.00%	1	25.00%	1	16.67%
Email	0	0.00%	1	25.00%	1	16.67%

Table 3: Strategies to Meet Teacher Education Needs in Rural Settings Included in All Advertisements

	Year 1 n = 195		Year 2 n = 202		Both Years n = 397	
Remote site instruction	10	5.13%	11	5.45%	21	5.29%
Alternative certification program	0	0.00%	1	0.50%	1	0.25%
Distance education	7	3.59%	11	5.45%	18	4.53%

Table 4: Frequency and Percent of Advertisements Requiring Expertise in Preparing Teachers to Work in Rural or Urban Settings with Descriptors about School Services and/or Programs

	Year 1 n = 2	Year 2 n = 4	Both Years n = 6
Inclusion	2	1	3
Percent of advertisements with descriptor that incorporates inclusion	100.00%	25.00%	50.00%
Percent of all advertisements for special education assistant professors	1.03%	0.50%	0.76%
Collaboration among special and general education faculty	2	0	2
Percent of advertisements with descriptor that incorporates collaboration	100.00%	0.00%	33.33%
Percent of all advertisements for special education assistant professors	1.03%	0.00%	0.50%
Unified teacher education program	0	0	0
Percent of advertisements with descriptor that incorporates unified program	0.00%	0.00%	0.00%
Percent of all advertisements for special education assistant professors	0.00%	0.00%	0.00%
Collaboration with schools	2	1	3
Percent of advertisements incorporating collaboration with schools	100.00%	25.00%	50.00%
Percent of all advertisements for special education assistant professors	1.03%	0.50%	0.76%

BEST COPY AVAILABLE

References

Bowden, J. (1994). The development of telematics in a rural district in western australia (Report No. RC 020 376). Queensland, Australia: International Conference of the Rural Education Research and Development Centre. (ERIC Document Reproduction Service No. ED 390 612)

Gold, V., Russell, S., & Williams, E. (1993). Special education in northwest ohio: A case study of rural service delivery problems. Rural Special Education Quarterly, 12(3), 423-46.

Lemke, J. C. (1994). How to keep qualified teachers in small school districts: What administrators need to know. Small Town, 25(1), 22-25.

Luckner, J. L., & Miller, K. J. (1994). Itinerant teachers - responsibilities, perceptions, preparation, and students served. American Annals of the Deaf, 139(2), 111-118.

Ludlow, B. L. (1996). Distance education applications in rural special education: Where we've been and where we're going. Rural Special Education Quarterly, 14(2), 47-52.

Ludlow, B. L., Bloom, L. A., & Wienke, W. D. (1990). Rural school services for students with severe disabilities: Changes in personnel and programs. Rural Special Education Quarterly, 10(2), 16-20.

Lundin, R. (1994). Rural isolation: Technologies for the delivery of education and training (Report No. RC 020 376). Queensland, Australia: International Conference of the Rural Education Research and Development Centre. (ERIC Document Reproduction Service No. ED 390 604)

McLaughlin, M. J., Valdivieso, C. H., Spence, K. L., & Fuller, B. C. (1988). Special education teacher preparation: A synthesis of four research studies. Exceptional Children, 55(3), 215-221.

Merrell, K. W., Pratt, S., Forbush, D., Jentzsch, C., Nelson, S., Odell, C., & Smith, M. (1994). Special education, school psychology, and community mental health practice in rural settings: Common problems and overlapping solutions for training. Rural Special Education Quarterly, 13(4), 28-36.

Morsink, C. V., & Lenk, L. L. (1992). The delivery of special education programs and services. Remedial and Special Education, 13(6), 33-43.

Rojewski, J. W. (1990). Issues in vocational education for special populations in rural areas. Technical Assistance for Special Populations Program, 2(2), 1-6.

Savelsbergh, M. (1995). Meeting changing rural needs: Recruitment and preparation of culturally diverse specialist cadres in an award winning rural internship program (Report No. RC 020 016). Las Vegas, NV: American Council on Rural Special Education. (ERIC Document Reproduction Service No. ED 381 328)

BEST COPY AVAILABLE

Shrestha, G. M., & Sutphin, H. D. (1995-96). Program delivery via satellite in the information age: Extension educators' perspectives on teaching techniques, communication channels, and participation. Journal of Educational Technology Systems, 24(2), 135-144.

Sindelar, P. T. (1995). Full inclusion of students with learning disabilities and its implications for teacher education. The Journal of Special Education, 29(2), 234-244.

Starlings, C. P., Wheeler, N. J., & Porterfield, J. (1994). The alternative instructional model (a.i.m.): Meeting the challenge of teacher preparation in rural/remote regions. British Columbia Journal of Special Education, 18(1), 46-53.

U. S. Department of Commerce, Bureau of the Census. (1992). *1990 Census of Population and Housing: Summary Population and Housing Characteristics, Appendix A - Area Classifications.* Washington, DC: Author.

Williams, E. U., Gold, V., & Russell, S. C. (1995). Distance education as a future trend for pre and inservice education (Report No. RC 020 016). Las Vegas, NV: American Council on Rural Special Education. (Eric Document Reproduction Service No. ED 381 326)

Williams, E. U., Gold, V., & Russell, S. C. (1991). A teacher training mentor model in rural special education (Report No. RC 018 473). Nashville, TN: Rural Education Symposium. (ERIC Document Reproduction Service No. ED 342 571)

Zumwalt, K. (1991). Alternative routes to teaching: Three alternative approaches. Journal of Teacher Education, 42(2), 83-92.

Keith Salyer,Ph.D
E. Joanne Necco, Ph.D.
Joann McCarthy, Ed.D.
University of Central Oklahoma
Edmond, Oklahoma
and
Sherry D. Ward,M.S.
Piedmont Middle School
Piedmont, Oklahoma

VOICES FROM WITHIN

Introduction

The expansion of metro areas in Oklahoma is changing the climate of the traditional rural school. Rural schools operate under the same state mandates and funding constraints of their larger metro counterparts, but the education provided by the rural school is qualitatively different. While the rural school has difficulty in offering as wide a variety and quality of electives as their larger counterparts, they are able to offer a community-like setting within the school. Students from small schools (less than 500 students per building) have been shown to outperform students in large schools on basic skills (Raywid, 1998).

Research has indicated that size of the school is the most important controllable factor in student achievement (Lee & Smith, 1994). Raywid (1998) synthesized the research on small school success and found that success is attributable to three factors: size, organizational structure, and a community-like setting. The organizational structure and the communication in a community-like setting allows students, teachers, administrators, and parents to work towards common goals more effectively.

Rural schools that were once more like the small school environment studied by Lee and Smith (1994) now find themselves torn between holding onto the small school climate and dealing with the urban school type problems. The issue becomes a matter of establishing, interpreting, and implementing school policy that addresses the needs as well as the concerns of the changing population. Influences from the community weigh heavily on the rural school system and make sorting out the real issues and feasible solutions more difficult. The collaborative climate disintegrates as the decision making process becomes more faction driven. Rural schools that once held the broad support of the community have now become the scapegoat for many societal issues.

Raywid's (1998) conceptualization of the community-like setting focused on the inter-relationships between students, teachers, and administrators within the community at large as well as the school's community. An implication of the community-like setting was that teachers and administrators took more ownership of individual students and followed their progression throughout their academic career. But with the increased mobility of the teaching force and limited services available in rural Oklahoma, many teachers are compelled to reside outside the school district. Additional factors in the exodus of faculty from the resident school community include a desire for anonymity, avoidance of assaults from the status-quo sector, and separation of social and professional lives.

The loss of the community-like climate has had dramatic effects on the quality of schooling that was found in rural schools in years past. The media has played an important role in promoting the effective, rural education image through coverage of standardized test rankings, community supported athletic programs, and low teacher to student ratios. The myth or fact of this perception is the subject of this pilot study.

Eighteen of the effective school factors defined by Wang and her associates (1994) were clustered into five broad categories. These categories were student aptitude, classroom instruction and climate, context, program design, and school organization. The design of the study required administrators, teachers, and students within a rural school system to assess each of these influential categories as they applied to learning within their school system. The degree of consensus within a school's administrator, teacher, and student populations are hypothesized to represent the organizational structure and community-like setting of effective small schools.

Recent publications have suggested that the perceptions of what is really happening in schools varies greatly. School administrators' and students' perceptions of the drug free status of their school varied by some 37% (Portner, 1997). Johnston and Nicholls (1995) found that in 26 of 28 participating schools the consensus of a democratic decision-making process was the leading factor in effective school operation. These studies are indicative of the importance of effective communication between all populations of the school structure.

Methodology

Subjects

The population was drawn from 5 rural schools in Oklahoma. The school systems were drawn at random from a pool of rural districts within a three county area of central Oklahoma. The participating districts had a mean student body population of 1,563, with a range from 798 to 1,986 students. Three sub-populations within the participating districts were surveyed. The first group consisted of school administrators which was defined for this research as central office administrators and building principals. Teachers made up the second survey group and students the third. Data were collected equally from all three sub-populations within each school system.

The total sample population of 126 consisted of 33 administrators, 39 teachers, and 54 students. The administrative population was 79% male while the teaching population was 86% female. The student population also showed a female dominance but was more gender balanced at a 52% to 48% ratio.

Instrument

The survey instrument content was drawn from a review of the literature on effective schools. Items were composed to represent 18 factors identified as common in effective schools (Wang, Haertel, & Walberg, 1994). Two item types were composed for each factor. The first was open ended, providing for a short narrative response. The second item type was placed on a 5 point Likert-like scale. The 18 factors were presented twice in the Likert-like item format: one positively phrased and one negatively phrased. To reduce the effect of content redundancy, one of the two Likert-like items for each factor was placed on a five point response set in a grading (A-F) format, while the other item set consisted of a 5 point "strongly agree" to "strongly disagree" format. All of the open-ended responses were collected and then the Likert-like items were collected.

Since the same form of the instrument was used with students and adult school personnel, the reading level was limited to a seventh grade level. A research fellow was present at the time of administration to answer questions and clarify item content. Administration time was not limited but ranged from 20 to 45 minutes.

Analysis

The matching attribute items from the two Likert-like data sets were subjected to confirmatory T-tests after transposing the scoring of the negatively phrased items. The results of 17 of the 18 T-tests indicated no significant difference between the A-F and the 1-5 phrased items. One data set A-F grading format was allowed to represent 17 of the content areas in a one (item)-by-three (administrators, teachers, students) analysis of variance. The open-ended responses for each of the 18 factors areas were used to clarify the perceptions of the subjects following the Tukey post-hoc analysis of the significant ANOVA items.

A qualitative analysis of the open ended responses was conducted using the Scolari NUD-IST program for personal computers. The item by item responses were grouped into administrators, teachers, and students for analysis. The factor tree for each item was then merged with the qualitative analysis of the Likert-like items to better understand the perceptions of each response group.

Results

The T-test results indicated that the two items that addressed the "valued as a person" factor differed significantly (.03). In a post-hoc analysis it was discovered that the subjects interpreted the A-F Likert-like item to represent school/job and responded in terms of how valued they were in the school setting. The 1-5 response format item elicited a broader life framed response.

The analysis of variance results for each factor are presented in Table 1. Significant differences were found within the three response groups on 14 of the 18 factors. The curriculum design, classroom methods, discipline, and special curriculum content factors were nonsignificant. The trend was for administrators to rate the factors as superior, with teacher ratings second, above average to superior, and student ratings lowest at average to slightly above average.

The first factor, classroom management, was rated above average by both the administrators (mean = 1.76) and teachers (mean = 1.91), but only average (mean = 3.38) by the students. The open-ended response items from the administrators and teachers indicated that management was a major part of their daily activity while, students indicated that they spent a lot of time waiting on the teacher. The issue seemed to be a difference between structure (rules, seating, grades, etc.) and organization (materials, lesson, etc.). The teachers and administrators focused on the structure side of classroom management while the students were more concerned with the organizational side.

The cognitive process factor was rated above average (mean = 1.88) by administrators but as only average (mean = 3.04) by students. The administrators' narrative responses were focusing on how their respective districts did in meeting "standards" while the students' responses were more related to specific skill acquisition.

Parental support was rated above average and average (mean = 2.11 & 2.56) respectively by administrators and teachers while students rated parental support as low average (mean = 3.15). The administrators' narrative responses focused on global support which included issues such as "turnout at school functions" and "voter support." Student responses were focused more on egocentric, daily issues such as "help with homework" and "purchasing school supplies."

Table 1
ANOVA Results by Attribute

Factor	Admin.	Teacher	Student	F	p
1. Classroom Mgt.	1.765	1.909	3.385	14.514	>.000*
2. Cognitive Processes	1.882	1.727	3.040	12.705	>.000*
3. Parental Support	2.117	2.556	3.154	5.600	.006*
4. Student/Tch. Relations	2.235	2.556	3.231	5.752	.005*
5. Behavioral Attributes	1.235	1.636	2.846	13.702	>.000*
6. Motivation					
Students	2.117	2.272	3.440	9.111	>.000*
Faculty	1.941	2.545	3.307	8.748	>.000*
7. Peers	1.941	2.300	3.039	6.078	.004*
8. Quantity of Inst.	1.353	1.330	3.539	39.924	>.000*
9. School Culture	1.765	1.909	3.154	11.954	>.000*
10. Classroom Climate	2.000	2.400	3.192	7.657	.001*
11. Classroom Instruction	1.824	1.634	2.769	7.623	.001*
12. Curriculum Design	3.429	3.500	3.368	2.026	.143
13. Academic Interactions	1.471	1.727	3.115	15.653	>.000*
14. Grades as Assessment	1.880	2.330	2.810	3.212	.049
15. Classroom Methods	2.571	2.110	2.806	2.020	.140
16. Admin. Decisions	1.471	2.111	3.240	14.728	>.000*
17. Discipline	2.650	2.200	2.812	2.363	.104
18. Special Curriculum					
Drug Ed.	2.285	3.222	3.625	2.286	.113
Sex Ed.	2.000	1.750	2.538	2.933	.063

Based on a 1-5 (A-F) scale with 1 being superior and 5 being failing. N=124

The fourth factor queried dealt with the student-to-teacher relationship. Administrators ranked their teacher's relationship with their students as above average (mean = 2.24). Their narrative responses indicated administrators defined a "show of respect" as the major indicator of the students' relationship with their school. The students (mean = 3.23) low average rating was clarified in their narrative responses as being based on "fairness, consistency" and "attitude" related issues. Several responses from both the teachers and students indicated the student-to-teacher relationship were perceived as adversarial in nature.

The behavioral attributes factor was comprised of social behaviors, positive and negative nondisruptive actions, and disruptive behaviors that occur within the school environment. The administrators rated this factor superior (mean = 1.24) while teacher ratings were at the high end of the above average range (mean = 1.64). Students rated the behavioral attributes within the average range (mean = 2.85). The administrators' and teachers' responses significantly differed from the students' ratings. The narrative analysis failed to clearly define the traits that discriminated the two groups. The indication from some responses confirms that much of the behavioral activity that occurs at school, positive as well as negative, goes unnoticed.

BEST COPY AVAILABLE

Table 2
Tukey-HSD Significant Differences

Factor	Significant Differences Between Groups at .05 or Higher	
1. Classroom Mgt.	Administrators & Teachers	Students
2. Cognitive Processes	Administrators & Teachers	Students
3. Parental Support	Administrators	Students
4. Student/Tch. Relations	Administrators	Students
5. Behavioral Attributes	Administrators & Teachers	Students
6. Motivation		
Students	Administrators & Teachers	Students
Faculty	Administrators	Students
7. Peers	Administrators	Students
8. Quantity of Inst.	Administrators & Teachers	Students
9. School Culture	Administrators & Teachers	Students
10. Classroom Climate	Administrators	Students
11. Classroom Instruction	Administrators & Teachers	Students
12. Curriculum Design	No Significant Differences	
13. Academic Interactions	Administrators & Teachers	Students
14. Grades as Assessment	Administrators	Students
15. Classroom Methods	No Significant Differences	
16. Admin. Decisions	Administrators & Teachers	Students
17. Discipline	No Significant Differences	
18. Special Curriculum		
Drug Ed.	No Significant Differences	
Sex Ed.	No Significant Differences	

The motivation factor was split into two perceptions. The first was a rating of the students' motivation by all three groups. Administrators and teachers rated student motivation as above average (mean = 2.17 and 2.27 respectively) while students said they were below average (mean = 3.44) in motivation. Motivation of the faculty was the second component of this factor. Administrators (mean = 1.94) rated themselves as above average in motivation and from the narrative responses their "time spent working" provided the basis for this assessment. Teachers rated themselves on the high end of average (mean = 2.55), which is lower than they rated the students' motivation (mean 2.27). The students rated the faculty's motivation as average (mean = 3.03) and only slightly higher than their own. The faculty responses, in general, defined motivation in terms of "dedication" to their job, while students were more inclined to view a teacher motivation in terms of the teacher's "attitude" and "the way" the teacher taught. The teachers followed the performance theme of defining student motivation in terms of "grades" and "participation" in school activities or organizations.

The peers factor focused on the academic aspirations, history, conformity, etc. of peers. The administrators responded with an above average rating (mean = 1.94) and suggested through the narrative analysis that students rose to the peer level that equaled their own abilities and aspirations. Students rated this factor as average (mean = 3.04) and also suggested that they naturally selected their own peer groups, but the selection criteria was broader than just abilities and academic aspirations. Students included "activities" that they enjoyed participating in as the most frequent reason for forming or joining a peer group, followed by social reasons, and then abilities.

Quality of instruction was rated near superior (mean = 1.35 and 1.33) by the administrators and teachers respectively while, students rated quality of instruction as below average (mean = 3.54). The administrators and teachers focused on "standards, test scores, and rigor" while the students were more inclined to view quality as "teacher's attitude, fairness, classroom organization, and activity level." This is next to the lowest rating the students gave any factor.

The school culture factor was concerned with the school wide emphasis on and recognition of academic success and was rated above average by the administrators (mean = 1.76) as well as teachers (mean = 1.9). Students rated this as low average (mean = 3.15). The significant differences between administrators/ teachers and students seemed to be based on frequency or the recognition within a given time frame. Teachers and administrators responded with information about awards, scholarships, etc. that are given on a biannual or annual basis. Students were more inclined to view the academic emphasis of school culture in light of daily issues of "assignments, classroom emphasis, daily grades," etc.

The classroom climate factor related to the cohesiveness of class members in sharing common interests, values, and goals. Administrators ranked climate as above average (mean = 2.0) while students (mean = 3.19) indicated that there was more strife in the classroom. The administrators indicated that "classroom structure, teaching skills, and compliance" attributes were important in establishing a cohesive classroom climate. Students were more focused on "fairness, rules, cliques, and respect by the teacher" as determining attributes of a cohesive classroom.

The attributes of instruction related to clearness and organization of classroom instruction. Again the administrators (mean = 1.82) and teachers (mean =1.63) significantly differed from the students (mean = 2.78). Administrators and teachers focused more on "structure, order, and standards" attributes. Students viewed classroom climate in terms of "fairness, rules, and success" attributes. This is one of the three significant factors where the teachers' ratings were higher than the administrators.

The curriculum design factor emphasized content, sequence, instructional tools, and alignment among goals and assessment. This factor was not significant between the response groups, but it is significant in that the administrators (mean = 3.43) and teachers (mean = 3.5) are both low average ratings. These low average rating are the only instance in the data set where the student ratings (mean = 3.36) were above the other two groups. This indicates that from all three perceptions the curriculum being designed and implemented in the schools is recognized as being disjointed.

The academic interaction factor concentrated on the student-to-student and student-to-teacher interactions concerning the content being taught. Classroom practices such as questioning strategies and small group activities fall within this factor's domain. The administrators (mean = 1.47) and teachers (mean = 1.72) were in the superior and above average ranges respectively, while the students (mean = 3.11) perceived these interactions as average to below average. The administrators focused on "program development," while teachers focused on classroom "practices and teaching styles." Students saw it as a much simpler issue of being "successful or failing, encouraged or discouraged, embarrassed," etc. within the classroom domain.

The assessment factor was rated significantly different by administrators (mean = 1.88) and students (mean = 2.81). The administrators indicated that formal assessment tools such as grades and test scores were valuable and a good indicator of school success. Students generally felt that tests and grades did not truly reflect what they really had learned. Students were grade conscious and valued grades for how it made them feel and how grades influenced other people's views of them as a person.

The classroom methods factor ranked the prevalence of establishing efficient classroom routines, rules, and procedures. Teachers (mean = 2.11) ranked these attributes at the average level while the administrators (mean = 2.57) ranked them at the lower average level. The students (mean = 2.8) rated this factor the lowest but not significantly different than the administrators or teachers. The differences in the narratives stemmed from knowledge of the "mission." Teachers and administrators have a method to their classroom expectations, but this method is not always communicated in direct forms to the students.

The administrative decision factor addressed how the system wide and building wide decisions are made and the degree of involvement of students, teachers, parents, and community in the decision process. The administrators rated the involvement of others in the decision making process as superior (mean = 1.47) while teachers (mean = 2.11) rated involvement as above average. The teachers' narratives indicated that they felt many of the policies mandated at the state and district level were not in their students best interest. One teacher noted it as, "The tracking and paperwork management system that is being required by my district interferes with my classroom effectiveness$_{(t41)}$." The students (mean = 3.24) were divided on this issue. Some felt that the decisions of the administration were in their best interest and aimed at protecting them physically and educationally while, others perceived the administrative decisions as constricting.

The discipline factor was not significantly different between the three groups. The administrators (mean = 2.65), teachers (mean = 2.2), and students (mean = 2.8) all rated discipline in the average to above average range. The narrative items revealed that all three groups also agreed in associating discipline as a negative, punitive actions.

The last factor, specialized curriculum areas, was not significantly different between the three groups. The teachers (mean = 1.75) rated the quality of their sex education programs as above average. However, they felt they were marginally trained to teach a drug education (mean = 3.22) curriculum. Students also rated quality of the sex education curriculum higher (mean 2.54) than the drug education (mean = 3.36) curriculum.

Conclusions

Several issues are brought up by this study. The major players in the game of education seem to each have their own agenda. The curriculum, instruction, and even learning are perceived differently by the three most important groups in the education setting. Coming to terms with and establishing an effective two-way line of communication within the school is important to the over-all school climate. Schools have become the whipping post for a lot of societal problems. A major step towards deflating the adversarial relationship that has developed over the past two decades is establishing effective communication and re-establishing pride in the school climate. Pride in one's school and community support of the school needs to become a priority of rural schools.

The narrative and quantitative data suggest that schools do not approach or recognize the student's perspective in constructing or carrying out the school's mission. Many students indicated that because their work, learning, as well as their personal and social self is not respected or valued they have withdrawn from fully engaging in school activities. The negative affective treatment they receive from the school environment is often erroneously projected onto the content (reading, math, etc.). While students have a passion for learning they do not always have a passion for schooling.

The students persistence in perceiving many of the educational factors as egocentric and emotive, such as success/failure (academic interaction), fairness (student to teacher relations, classroom climate, and classroom instruction), attitude (motivation), and punitive measures (discipline), is indicative of an environment that is not psychologically secure. Interventions aimed at clarifying classroom methods, increasing the organizational structure of the classroom instruction, increasing teacher affect in relating the material, and developing a cohesive support network for learning are supported by this research. This supports Brooks (1985) observation that students want to know, "Who their teachers are as people?" and "Will the teacher treat them as a human being?" The importance of the student-to-teacher relationship has far reaching implications. When students and teachers combine individual strengths (positive attitudes, organizational skills, and respect) through open communication a synergistic effect on academic success will result.

Recommendations

1. The common goals of education are must be formulated and communicated effectively between the administrators, teachers, and students.

2. Discipline, which is viewed as a punitive and negative issue by the administrators, teachers, and students needs clarification. People will rise to the expectations that are given them. It is appears that our current expectations of discipline are negative. These expectations must be reformed to promote responsive and positive choices from all parties.

3. Schools need to emulate a democratic society in the decision making process., Students perceptions are equally important to that of teachers and administrators since they are the constituency that schools are designed to serve.

Bibliography

Brooks, D.M. (1985). The first day of school. Educational Leadership 42(5), 76-78.

Johnston, P.H. & Nicholls, R. (1995). Reshaping the principalship: Insights from the transformational reform efforts ERIC Document No. 377-592

Lee, V., & Smith, J. (1995). Collective responsibility for learning and its effects on gains in achievement for early secondary school students Madison, WI: National center on the Organization and Restructuring of Schools.

Portner, J. (1997). Drugs are easy to get at school, teens say. Education Weekly, September 17.

Raywid, M.A. (1998). Small schools: A reform that works. Educational Leadership 55(4) 34-39.

Wang, M., Haertel, G.D., & Walberg, H.J. (1994). What helps students learn? Educational Leadership 51(1) 74-79.

Dawn Burke, M. Ed.
Wiley Ford Primary School
Wiley Ford, West Virginia

Thomas P. Lombardi, Ed. D.
West Virginia University
Morgantown, West Virginia

STANFORD ACHIEVEMENT TESTS AND STUDENTS WITH SPECIAL NEEDS

Abstract. As public school accountability becomes correlated with standardized achievement test scores, general teachers are especially concerned about students with special education needs. Presenters comment on one rural county school system and report the dilemma many teachers face.

In his State of the Union address to the American people, President Clinton made it clear that his number one priority for the next four years would be to ensure that Americans have the best education in the world. As part of his action plan, he proposed rigorous standards, with national tests in fourth grade reading and eighth grade math to make sure all children master the basics. Every fourth grader would be able to read; every eighth grader would know basic math and algebra.

To make sure this goal is met, the President has pledged the development of national tests in fourth grade reading and eighth grade math challenging every state and community to test every child in these critical areas by 1999. By using standardized tests, local, state, national and international comparisons in achievement would be available for all students. Parents would know if their children are mastering critical basic skills, teachers would know if their instruction is effective, and school administrators would know where strengths and deficiencies are occurring in their schools.

One state that clearly agrees with the President's challenge is West Virginia. In the years past, West Virginia administered the Comprehensive Test of Basic Skills (CTBS) in its entirety for grades 3, 6, 9, and 11. West Virginia made impressive gains on the 1996 National Assessment of Educational Progress (NAEP) State Math Assessments taken by 43 states. In the fourth grade, West Virginia ranked ninth nationally, in the eighth grade, it finished fifteenth. Recently, West Virginia legislators passed Senate Bill 300, Jobs Though Education Act, requiring all students in grades one through eleven to take the Stanford Achievement Test. Grades one and two will only complete a partial battery consisting of reading, mathematics, language and listening. Under this new law, a minimum of 50% of the school's students in grades three through eleven must perform in the third quartile in total basic skills. If the school does not meet that criteria, it is considered to be deficient. Any student performing below the 50th percentile in the areas of reading, mathematics, or language at grade eight or above will be placed in a skills improvement program in the area of deficiency. A county warranty, stamp, or other appropriate symbol will be awarded to every student who achieves a proficiency level of the 50th percentile by grade eleven in the basic skills area.

A key provision established by the West Virginia Bill 300 is a clause which states that all students will be tested with the Stanford Achievement Test ***except*** those in special education whole ***individualized education program*** specifies that the student shall be excluded from the state wide assessment program. This provision has far reaching effects both from a practical as well as accreditation perspective. Past standardization samples from the CTBS (Comprehensive Test of Basic Skills) excluded students from special education in their norming sample. However, the Standard Achievement Test does include students from special education in their norming sample. The percentage and disability categories are : emotionally disturbed, 0.3%; mentally handicapped, 0.1%; and the learning disabled, 2.5% (Harcourt & Brace, 1996). Students identified as having severe mental handicaps or emotional disturbances were not included. As in their past standardization norms, students identified as being gifted or having speech disorders were considered part of the traditional norming sample. Interestingly, students with these identifications are also considered eligible for special education services, at least in West Virginia.

The West Virginia Department of Education has issued a memorandum providing some guidelines for county schools to follow for inclusion and exclusion purposes (West Virginia Office of Special Education, 1997). Any student, including a student with a disability, who meets the state and county's graduation requirements can earn a standard diploma. However, to be considered for a warranty a student must participate in the State Assessment Program and take the grade level test with NO modifications. Each county school system will establish a specific percentile level that must be met by a student on the state assessment test to earn a warranty. The Individualized Education Program Committee (IEP) must decide on an individual basis if a student with a disability should participate in the testing program. This must be documented on the IEP and reviewed annually. Decisions regarding participation of a student who is disabled and has a Section 504 plan must be made by a Section 504 Committee. Students with disabilities who are involved in learning basic academic skills and other components of the general education curriculum for part or most of the instructional day, should participate in the program. Accommodations (large print, braille tests, helping with bubbling for completing answer sheets, interpreter signing directions, etc.) may be applied, when necessary, to enable a student with disabilities to participate in the program. **These accommodations should not be such that they interfere with standardization procedures.** In addition, they must be described and justified on the student's IEP or Section 504 plan. If it is determined by the IEPC or the Section 504 Committee that a student cannot be tested under standard conditions, but can participate with modifications to those conditions, these must be described and justified on the student's IEP or Section 504 plan. Examples of modifications might include having parts of the test read or extending time factors. **The test results of students who test with modifications will NOT be aggregated with the results of their peers**, however, the school will receive the individual student's test record with the responses that were right and wrong (raw score) for each subtest. **If an IEP Committee determines that a student with disabilities cannot participate in the State Assessment Program, even with accommodations and/or modifications, it must document this decision and provide a justification on the IEP for exclusion from testing**. This last option was primarily designed for those students with disabilities, such as the moderately mentally impaired and students with severe and profound disabilities who were not included in the norming sample of the Standford Achievement Test, whose instruction focuses on the development of functional life skills. This group of students will be given a different assessment program which is in the process of being developed.

In the Fall of 1996, the Mineral County Schools in West Virginia gave a preliminary test to all its students to allow educators, administrators, and students to look at the Standard Achievement Tests and what might be expected when formal, mandated testing would begin. The Harcourt Brace Company , which developed and publishes the SAT, agreed to report test results in two ways. The first would include all student who were tested (general and special); the second would exclude all students with an IEP. Almost without exception all grades in all schools increased in percentile ranks when the students with IEP's scores were eliminated from the aggregate scores. Almost twice the number of grades would have met accreditation standards when the scores from students identified as having an IEP were eliminated. Once again, students having IEP's because of speech problems or giftedness were automatically not considered a part of the special education population. There was no attempt to see if scores would have declined if these students' scores were eliminated from the aggregate accounting. Looking at one school in Table 1 presents a fairly typical sample.

Table 1
Standford Achievement Test Scores for School E

School	Description	# of Spec. Students	# of Reg. Students	% of Spec. Ed. Pop.
E	5 - 8	94	586	16%

	# of students	# of sp. students	percentile rank w/ sp. students	percentile rank w/o sp.students
Grade 5	147	17	54	60
Grade 6	138	11	58	62
Grade 7	135	18	54	61
TOTAL:	**420**	**46**		

Of the 420 students being tested in grades 5, 6, and 7, 46 were identified as receiving special education in the general education program. This is 11% of that school's population. It triples the percentage of students with special education needs that were included in the Standford Achievement standardization population. Percentile ranks with the special education population were 54, 58, and 54 for grades 5,6, and 7. Without the special education population they were 60, 62, and 61. It should be noted that, in this county, some schools have as much as 16% of their school population having written IEP's.

Following this pilot testing, a survey was conducted with both the general and special education teachers in Mineral County. For the most part, general educators felt too much emphasis is being placed on just one type of assessment. They were also very concerned about the inclusion of special education students' scores being included in their aggregate test scores. On the one hand, they have been encouraged to accept special education students and modified their instruction to accommodate individual needs; on the other hand, they now must give greater concentration on needs as dictated by standardized achievement questions. Many general educators expressed concern that they have not received all the support needed to effectively teach students with special education needs in their general classes. Special education teachers surveyed indicated they are now facing pressure from some general classroom teachers to exclude standardized testing on students' IEPs. Some also feel there will be a dramatic increase in the number of students which will be referred to special education. They note that students who receive IEP's because of identification as gifted probably increase scores on standardized tests. Some secondary teachers feel none of the special education students should even be considered in the Standford Achievement Test accountability. However, if that were to be fostered, none of the students who received special education services would be eligible to receive the warranty associated with the high school diploma. Such could effect special education students' self concept, motivation , and desire to even stay in school. It could also have serious implications for post high school plans. Primary school teachers question the appropriateness of standardized achievement testing for first and second grade students. Their opinions are consistent with the position of the Association for Childhood Education International (ASCI, 1991).

Since the publication of "a Nation at Risk" in 1983, standardized testing has dramatically increased. Teachers feel compelled to spend time preparing their students to primarily master the basic skills included on adopted state wide tests. They may end up teaching to the test. And students with special education needs who have come so far with inclusion practices, may find themselves once again isolated from their peers . Responsible educators should not let this happen.

References

Association for Childhood Educational international. (1991). Position paper on standardized testing. *Childhood Education* , 67(30, 131-142.

Harcourt Brace Educational Measurement. (1996). *Standford achievement test series (9th ed.).* San Antonio: Staff.

West Virginia State Department of Education. (1996). *Policy 2320 performance based accreditation system.* West Virginia School Code.

West Virginia Office of Special Education. (1997). *Assessment of special education student guidelines.* Feb. 27 memorandum.

Melanie B. Jephson, Ph.D.
Kendra P. Russell, M.Ed.
L. A. Youngblood, M.Ed.
Interdisciplinary Early Intervention Training Project
Stephen F. Austin State University
Nacogdoches, Texas

FAMILIES AND EARLY INTERVENTION PROFESSIONALS IN RURAL AREAS: UNIQUE CHALLENGES

In Texas, early intervention services for young children birth to three years of age who have a medical diagnosis, developmental delay, or atypical behavior occur in natural environments with an emphasis on family-centered practices which empower parents to be active decision-makers in the lives of their children. Early intervention professionals identify family concerns, priorities, and resources, then provide services that will enable families to enhance the development of their child. The more support families receive to address their critical personal and family needs, the more likely they are to devote time and energy to their child's educational needs (Turnbull & Turnbull, 1997). The purpose of this paper is twofold: 1) to examine the literature related to the specific challenges faced by families with young children who have disabilities as well as those of early intervention professionals who live and work in rural programs; and 2) to describe the results of a study targeting families and early intervention professionals in rural East Texas, comparing them with the literature.

The needs of families with children who have disabilities were first summarized by Turnbull, Summers, and Brotherson (1984) who identified seven categories: affection, self-definition, economics, daily care, socialization, recreation, and educational/vocational issues. This work has since been expanded by others. Mahoney, O'Sullivan, and Dennebaum (1990) conducted a survey with a national sample of 503 mothers of birth to six-year-old children with disabilities currently enrolled in early intervention regarding their needs for family intervention services. Mothers felt it was extremely critical that programs provide systems engagement and child information (laws, advocacy, child development, disability and health information), moderately critical to provide family instructional activities (how to play with and teach the child) and resource assistance (referrals, transportation, funding), and least critical that personal/family assistance be provided (counseling, stress management, help with personal problems). According to Howard, Williams, Port, & Lepper (1997), economic needs head the list, followed by physical needs (adequate housing, food, clothing, and the like), available routine and emergency health care, the opportunity to work in a satisfying job with security, routine and emergency child care, transportation, a means of communicating or having contact with relatives, educational opportunities, and opportunities for recreation. Finally, families have emotional needs for positive personal relationships inside and outside of the family, for friendships, and for a sense of belonging to the community.

In 1988, the Rural Early Childhood Special Education Task Force examined issues concerning families in rural areas, indicating that families in small rural communities have fewer choices of programs and services, transportation problems, and feelings of isolation because their child may be the only one in the community with a particular problem. Since then, other researchers have explored the needs of rural families in particular. Sontag, Schacht, Horn, & Lenze (1993) surveyed 536 families with children who were either developmentally delayed or at-risk of developing a disability in the state of Arizona, comparing the needs of urban versus rural parents. A greater number of parents from rural areas needed information about their child's educational and physical needs and about where to get toys and materials for their child than did their urban counterparts. Parents from rural areas indicated they did not know where to obtain services such as respite care, vision and hearing screening, and speech/language therapy. It was also reported that rural families must travel more frequently and pay for lodging and meals away from home while seeking services for their child, and that children in rural areas are hospitalized more frequently than children from urban settings.

Doctoroff (1995) examined issues related to the delivery of early intervention services that are unique to rural environments and described the needs of rural families with children who have disabilities. Inadequate transportation is a significant problem in rural areas. And, in order to obtain services, rural families must travel more frequently and over longer distances, sometimes with poor road and weather conditions. Families in rural areas may also have limited economic resources, having lower average incomes and higher rates of poverty than their urban counterparts. Rural families have fewer choices of programs and services, and support services such as respite care are often unavailable in rural areas. Like Sontag et al. (1993), Doctoroff found that children in rural areas are hospitalized more often due to lack of proximity to medical care and families are more likely to spend money for lodging and meals when they travel to obtain services.

Unique challenges exist not only for rural families with children who have disabilities, but also for the early intervention professionals who serve them. Rural programs have traditionally faced significant difficulty in recruiting and retaining well-trained special education and related services personnel and experience high turnover rates (Ludlow, Bloom, & Wienke, 1991; Mallory & Berkeley, 1987; Rural Early Childhood Special Education Task Force, 1988). When well qualified professionals are not available, rural program directors are forced to hire individuals who reside in the area but lack training in early intervention (Doctoroff, 1995). Other problems experienced by early intervention professionals working in rural areas include professional isolation, limited professional resources, conservative community attitudes toward change, lower salaries than urban areas, lack of recreational, cultural, and educational opportunities, distance between children/families served, inadequate transportation, and limited availability of therapeutic and technological equipment (Doctoroff, 1995; Rural Early Childhood Special Education Task Force, 1988).

METHOD

Subjects

Parents of young children with disabilities served in rural early intervention programs and professionals from three early intervention programs serving fifteen counties in rural east and southeast Texas participated in the study. One early intervention program was located in a large community served the surrounding rural areas and had a history of providing center-based services. Because of state mandates, the program had recently changed to home-based service delivery. Staff in the program included a program director, a registered nurse, fourteen early interventionists, therapists, and support staff. The second early intervention program was also previously center-based, serving one rural county. Staff in this program included a director, a registered nurse, a secretary, a paraprofessional, three early intervention specialists, and four contract therapists. The third program was historically home-based, providing services in a twelve county rural area and was the recipient of an ACRES award in 1990. Program staff included a program director, five secretarial staff, three nurses, three speech-language pathologists, four licensed speech therapy assistants, two physical therapists, three physical therapy assistants, one occupational therapist, two family therapists, three teachers, and fifteen early intervention specialists. Twelve professionals (two nurses, a teacher, a family therapist, and eight early intervention specialists) from the programs described above, participated in the focus group discussion. Forty professionals and a random sample of twelve parents from the early intervention programs were asked to complete open-ended questionnaires. Three professionals involved in the study were also parents of children with special needs.

Procedure

Two methods were used to collect information: a focus group discussion and an open-ended questionnaire. In a relaxed and comfortable environment, focus group participants were asked to share their ideas and perceptions regarding the needs, challenges, and problems of early intervention professionals who work in rural areas and of those of rural families with young children who have disabilities. The questionnaire included two open-ended questions, "What are the needs, challenges, problems of staff working in a rural setting?" and "What are the needs, challenges, problems, of families living in rural areas?" Early intervention professionals from the above programs answered both questions, while family members answered only the second question. All participants were offered complete anonymity in an effort to obtain the most candid answers. Participants were informed, however, that the results would most likely be published or presented at a professional meeting.

Results and Discussion

The return rate for parents and professionals was similar: sixty percent of forty professionals returned questionnaires (N=24) while seven out of twelve parents returned questionnaires (58% return rate). A very simple content analysis procedure was used to analyze results of the focus group discussion and survey. In response to the first question regarding the needs, challenges, problems of professionals working in a rural setting, the most frequent response was a lack of resources to meet the needs of families, followed by a lack of training in specific disabilities. If training was available, it was often too far away or too expensive to be feasible. Participants indicated that the amount of paperwork and the time to complete it was a significant problem as was lack of transportation or inadequate transportation for families and the distance or amount of travel time necessary to provide services. Other challenges mentioned included lack of job security, raises, and incentives, bad roads, dangerous situations, "red tape" involved in providing services, inadequate services from Child Protective Service, lack of support groups for parents and professionals, lack of information on working with children in rural areas, auditors who are unfamiliar with the region, continual bombardment with fiscal issues and other problems that are not client-related, lack of new ideas, large caseloads, "no-show" appointments, and lack of recreational opportunities.

In response to the second question regarding the needs of families, the most frequent response was lack of economic resources to meet basic needs for food, utilities, and the like. Lack of transportation was the second most frequent response followed by lack of affordable housing. It was reported that families in rural areas are often on waiting lists for housing for years. Participants indicated that a lack of medical facilities and medical care was a particular problem in rural areas with other related problems including difficulty finding housing and money for food as well as help with other children while one child is hospitalized. Other challenges faced by rural families that were reported included feelings of social isolation and the need for someone to listen, lack of interaction with other parents of children with special needs, lack of support systems for parents, problems with transition of the child with a delay or disability into other programs after early intervention, lack of decent paying jobs, lack of affordable day care, lack of respite care even for one day, and finally, fear of authority figures such as law enforcement and social service workers.

This study has several limitations that affect generalization of the results including a small sample of subjects, the use of subjects located in only one rural area of Texas, a large state that is geographically diverse, and the possibility of bias because only certain individuals chose to repond to the questionnaire. These results do, however, at least in a preliminary way, confirm or validate the problems of rural families with young children who have disabilities and early intervention professionals who work in rural areas that are identified in the literature. Those who participated in this study failed to identify systems engagement, child information, and instructional activities as significant needs, but instead focused on economic issues and significant basic needs such as transportation, housing, and access to medical care. In addition, they identified feelings of isolation indicating a need for social and emotional support.

Individuals who live and work in rural areas face unique challenges. Creative solutions must be found to problems such as these in order to improve options for rural families. An infrastructure must be built to provide a full range of supports for families in rural communities and to provide effective early intervention services in rural areas. Federal and state resources must be mobilized to focus on the needs of families in rural areas. Funding must be identified or established to compensate families for expenses when travel to access medical care is necessary. Models for social support and respite care must be identified.

Much needs to be accomplished in terms of recruiting, training, and retaining early intervention personnel to work in rural areas. Training programs which have traditionally been located in urban areas need to place rural service delivery on the agenda. Trainees must be familiar with the issues and challenges of working with rural families and must be thoroughly familiar with social support services and networks in rural areas. Early intervention personnel must become strong advocates and lobby at state and national levels for increased funding to build the infrastructure needed to support families in rural communities. Distance education strategies such as interactive video teleconferencing, computer technology, videotaped courses and inservice programs, and use of public television may be viable solutions to the issue of ongoing training for those who live and work in rural areas.

References

Doctoroff, S. (1995). Providing early intervention services in rural areas: Meeting the challenge. Infant-Toddler Intervention, 5 (4), 339-352.

Howard, V. F., Williams, B. F., Port, P. D., & Lepper, C. (1997). Very young children with special needs: A formative approach for the 21st century. Upper Saddle River, NJ: Prentice-Hall.

Ludlow, B. L., Bloom, L. A., & Wienke, W. D. (1991). Rural school services for students with severe disabilities: Changes in personnel and programs. Rural Special Education Quarterly, 10 (2), 15-20.

Mahoney, G., O'Sullivan, P. & Dennebaum, J. (1990). A national study of mothers' perceptions of family-focused early intervention. Journal of Early Intervention, 14 (2), 133-146.

Mallory, B. L., & Berkeley, T. R. (1987). The relationship between rural characteristics and the preparation of early childhood special educators. Rural Special Education Quarterly, 7 (2), 1-5.

Rural Early Childhood Special Education Task Force, American Council on Rural Special Education (1988). Response to PL 99-457, Titles I and II: Issues concerning families residing in rural and remote areas of the United States. Rural Special Education Quarterly, 9 (1), 24-28.

Sontag, J. C., Schacht, R., Horn, R., & Lenz, D. (1993). Parental concerns for infants and toddlers with special needs in rural versus urban counties of Arizona. Rural Special Education Quarterly, 12 (1), 36-46.

Turnbull, A. P., Summers, J. A., & Brotherson, J. J. (1984). Family life cycle: Theroetical and empirical implications and future directions for families with mentally retarded members. In J. J. Gallagher & P. M. Vietze (Eds.), Families of handicapped persons: Research programs, and policy issues (pp. 25-44). Baltimore: Brookes.

Turnbull, A. P., & Turnbull, H. R. (1997). Families, professionals, and exceptionality: A special partnership (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

James E. Whorton
University of Southern Mississippi
Hattieburg, MS

Robert E. Fowler
University of Charleston
Charleston, SC

James A. Siders
University of Southern Mississippi
Hattiesburg, MS

THE WHOLE WORLD: JUST DOWN THE ROAD

Introduction

A feeling of isolation, real or imagined, among special education teachers and students in rural areas may be needless today. Communication devices such as cellular telephones and pagers are common and have revolutionized the way in which we stay in contact with one another. Only a few years ago, the use of either of these devices was limited to metropolitan areas. Today, only very remote areas are "out of range" for these communication tools. Access to commercial television even in isolated areas has now been made easy and inexpensive with the proliferation of 18" satellite dish receivers.

Once restricted to only a few individuals, the Internet is now realistically accessible with little trouble and at reasonable cost. It has been said that the Internet, particularly the World Wide Web (WWW), is the most revolutionary advancement in communication since the invention of the printing press. Information disseminated through the Internet has become commonplace to the point that commercial advertisements, both print media and television, routinely provide web addresses.

That a global community exists is not highly debatable. For example, using electronic mail it is as easy to correspond with someone on the opposite side of the globe as it is with someone in the same city. Files containing text, pictures, and sound are easily and quickly sent via e-mail.

Not too long ago it was a tedious and complex task to design WWW pages. A number of inexpensive and easy to use programs for creating WWW sites such as Adobe PageMill, Claris HomePage, and Microsoft FrontPage are now available. A number of WWW sites offer free graphics for noncommercial use and inexpensive digital cameras (less than $300) provide a way to incorporate high quality photos into a WWW "page."

A special education classroom teacher may now create a WWW site without a great deal of expense or time. The functionality of such a site is almost limitless. The class's "home page" could inform parents and other caregivers about what's going on in the classroom, invite participation in special projects, or request communication via e-mail. Links to other sites within the school or the district could be included.

A WWW site has the potential for the special education teacher to: 1) act as a powerful communication tool for students' caregivers, and 2) expand the classroom into the larger community. This manuscript focuses on the development of a home page, a WWW site, for a classroom; it will address both the creation and maintenance of the site. It will also include a variety of economical sources for the necessary software.

BEST COPY AVAILABLE

Planning

This is a crucial part of the web site. Not only will the lack of proper planning be evident later on, it will also take more time to construct the site. Attempting to make a web site without detailed and careful planning is much like taking a cross-country trip without a destination in mind.

Particularly with a first attempt, it is important to keep it simple! If it can be said in four words, don't use forty. Details such as graphics, sound, and backgrounds will be discussed later but a brief word regarding these is in order here. Just because you can do it, doesn't mean you should. Too many sites were constructed with a singular purpose in mind: demonstrating as many "bells and whistles" as possible. A simple, straightforward approach is always better, assuming that communication of information is the primary purpose of the web site.

The "storyboard" approach is the singularly most useful device in planning a web site. We recommend the use of 5" x 8" index cards for this purpose. Thus, each card can represent a screen, complete with graphics, text, background, navigation aids, etc. Annotations regarding text size and type, colors, sketches of photographs and graphics and the like can be made easily.

Purpose

Insofar as the classroom teacher is concerned, most likely the purpose of the site will be communication of information to caregivers, students, and others. The information will probably be related to the individual classroom with possible links to the school's site and other relevant sites. You might want to include information relative to what's now being studied, in each curricular area. Along with this information you could include suggestions that caregivers might use to reinforce what you're doing in the classroom. Upcoming activities such as field trips, units of study, PTA/PTSO meetings, and class projects are appropriate as well.

Additionally, a web site is an excellent means of soliciting input via e-mail. E-mail is more convenient than telephone calls. Virtually everyone with internet access will have access to e-mail. E-mail can be done at any time; the intended recipient need not be at any particular place when the message is sent. Perhaps more importantly, you can choose when to read your e-mail. And, you have a permanent record of messages received (and sent if you so choose) until you delete them. In the final analysis, communication via e-mail is efficient and convenient for the sender and the recipient.

A final thought about the purpose of the site. The site will essentially be a representation of you, your classroom, the school, and the school district. Thus, it must be correct in every detail. The site can and will be viewed by persons far outside of the immediate school community. Judgments, right or wrong, will be made by individuals from within and without. The smallest inaccuracy (such as a misspelled word) will bring negative attention and criticism. In addition to your own proofing and critical review, you should have others view it before it is "published." A poorly done site is unquestionably far worse than none at all. Many districts and schools will require prior approval by an administrator or a committee before the publication of a site to avoid potential embarrassment. Free speech is an issue separate from issues associated with sub-units of an organization being representative of the larger unit.

BEST COPY AVAILABLE

Clarity

"White space" is one of the most useful strategies for achieving clarity. As with the print medium, white space serves to frame or emphasize text, graphics, or other elements. The tendency to fill each centimeter of space with something" is to be avoided at all costs. Using white space as a design technique does not mean that color or other backgrounds cannot be used. "Open" space might be more descriptive of the process.

Fonts used can add to the clarity of the site. Many advocate the use of a plain straightforward "sans serif" font such as Helvetica or Arial. These fonts are easier to read and they facilitate, rather than impede, communication. This is particularly important since it has been estimated that people read screen text approximately 40% slower than print on a page. The use of all capital letters to emphasize a word is an acceptable technique if it is kept to a minimum. You should not use all caps for an entire paragraph as it is more difficult to read. Although the browser used by the individual can control the relative size of the fonts on the screen, care should be given to using a font which is large enough. On the printed page, a font smaller than 12 points is somewhat difficult to read, especially if single spacing is used. Generally, screen fonts should be no smaller than 14 points.

We are all used to reading black text on a white page and this is acceptable with web pages. The "default" color of the background in HTML is gray. Black text on a gray background can, however, be difficult to read, particularly if the font is a small one. Using a textured background or a color background can make a web page more interesting or attractive as long as one thing is kept in mind: the contrast between the background and the foreground (text) must be good. One last recommendation is that white text on a black background be avoided, or at least used judiciously.

Consistency

If not required to use a theme (format or metaphor) by a school or a district, you should try to achieve consistency throughout the web site. This can be done by using a particular color scheme throughout the site. Another device which has been used with a great deal of success is employing graphics which have a particular theme such as "school." Such a theme would use graphics which suggest "school" such as a pencil, apple, school bus, etc. Backgrounds, navigation buttons, and dividing bars would all be related to the same theme. It is not mandatory, however, that you use a theme or metaphor as long as consistency is somehow achieved.

Navigation is an element of web site that is often poorly done even by professional designers. Each site will have a "home" (main) page with "hyperlinks" to other pages within that site or beyond. Each page within the web site should have clear and consistent ways to navigate. At the top and/or bottom of each page in the site there should be a "button" on which the user can click to go back to the home page. Navigation buttons (icon, graphic, photograph, word) should be used consistently throughout the site. Placement of the buttons should also be consistent throughout the site. One should not have to guess how to navigate or be caught in a page without an easy way to go forward or backward.

A final caution regarding the use of "frames." Older versions of the popular web browsers don't recognize these, but newer versions do. A frame is a graphic device which has choices in one place (typically a column or side-bar) that, when clicked, reveals a different "page" in another area of the screen.

Use frames if they suit your purpose and you can do them well, but be careful of overly complex and confusing frames.

Format

Even beginners should avoid the temptation to construct a site that consists of one large document. What might typically fit on an 8.5" x 11" piece of paper will require a great deal of "mousework" from the viewer. Pages requiring a lot of scrolling to view the content, particularly textual material, can truly be a test of an individual's interest, if not dogged determination. If, for some reason, you want to create a lengthy page at least have the courtesy to provide hyperlinks within the text so that the user doesn't have to do a lot of scrolling.

The main page should be one that will quickly get the attention of the (potential) viewer. The first thing the viewer sees should instill a desire to find what else is in store. You must ensure that the main page does not take a great deal of time to download. It has been estimated that interest is lost and a person moves on if a page takes longer than twenty seconds to download. Plain text will download quickly but is highly unlikely to gain attention. Graphics, including textured backgrounds, will cause a page to download v-e-r-y slowly. Obviously, this is a function of the size of individual graphics and the number of graphics on a page. It is possible to add sound to a page (typically WAV files) but this is another effect that slows down the loading of the page. Sound can add an interesting dimension to a page but you have to assess the trade-off in terms of time. The user must also have the hardware and software necessary to actually play the sound.

Once the page is loaded into the viewer's computer it should be simple to move to other areas of the site. As previously discussed, even if the site consists of one large page, hyperlinks to other parts of the page should be provided. The ideal site, however, will have a main page from which the viewer may choose to go to other areas of the site or elsewhere. Never assume that everyone will wish to view every aspect of your site.

Graphics

A strength of the WWW is the display of graphics (e.g., cartoons, drawings, photographs). The graphic must be relevant to content of the site or the purpose involved. For example, it makes sense to use a graphic of a right-pointing arrow to provide a hyperlink to a next page. But, using a small graphic of the Mona Lisa as a navigation icon might be less logical. The use of graphics without relevance or purpose may be counterproductive.

Graphics can come from a number of sources. A photograph can be taken with a digital camera and imported directly into the authoring software. Quality digital cameras have become reasonably priced. You can now buy a digital camera for $300 or less. Photographs taken with such a camera and manipulated with software such as Adobe PhotoShop LE are perfectly acceptable for using in a web site. Photographs can also be scanned and scanners are available for around the same price as the digital cameras. Generally speaking, digital cameras are not as good at taking action shots as are relatively inexpensive 35 mm cameras with fast film. There is no excuse for including a poor quality photograph in a web site.

There are numerous web sites with free graphics for web page construction. A list of some of the sites is in the appendix. Guidelines for use of the graphics are included at each site. Some require nothing as long as the use is non-commercial. Others want a link back to the site. Many require that credit be given to the author as the copyright holder. A few ask for an e-mail message containing the URL of the site using the graphic(s). There are also a number of relatively inexpensive CD-ROM's with hundreds or thousands of fonts, clip-art, web graphics, and photographs. Most are relatively inexpensive and require no royalty fees for use. However, given the quantity and quality of free graphics available on the web it is difficult to justify the cost of these sources, especially for the beginner.

Scanners were previously mentioned in the discussion of acquisition of photographs. Other graphics can be scanned, but great care must be taken in this regard. Scanning a drawing of Winnie the Pooh and using it in your web site without permission would be a clear copyright violation. Unless you have secured the necessary permission or you are absolutely certain about the legitimacy of a graphic don't use it. Your school media specialist may be an excellent resource person for questions in this regard.

A relatively new special effect on the web is the use of the animated GIF (a particular format for a graphic). The latest web browsers will display these as moving graphics while the older ones will display them as static images. The motion of the animated GIF can be an effective attention-getting device. Overdone, however, it becomes annoying to the viewer and counterproductive to the message. One animated GIF per page is probably sufficient and some would even recommend against this. Animated GIF's are usually larger and take longer to download than non-animated GIF's.

Color

Watching a black and white movie or television is something few of us do routinely. Color brings a new dimension to what we view. Nicely illustrated children's books are inherently more interesting than black print on a white page. Color, on the other hand, can be distracting and can interfere with communication. Contrast was mentioned earlier in the context of clarity. Complementary colors have the highest contrast (e.g., Red/Green, Yellow/Violet, Blue Orange). Be judicious in your use of color.

Additional Notes

There aren't many mandatory items for a web site but there are three reasonable expectations. First, the person(s) responsible for the site should be indicated. The "webmaster's" e-mail address (or a person to whom comments or inquires should be directed) should be on the index (main) page. You should also include the date of last revision of the site.

Don't publish a web site until it's complete. Although every web site is a work in progress, it is irritating to go to a site only to see an "under construction" sign. Wait until you're ready for visitors before you publish the site. You may, nonetheless, indicate that the site, or a particular portion of it, changes frequently. This approach will encourage people to check back for updates.

If you have hyperlinks on your site, make sure they work! It's frustrating to click on a link only to learn that it no longer exists. Check your links periodically to see if they still work. Sites often move locations and you owe your visitors the courtesy of providing accurate and current links.

Help is Everywhere

In addition to numerous books on HTML and web site design, the web itself is a great place to begin. You may want to look at other school sites just to get an idea of what people are doing. But, don't let some of the flashier sites intimidate you. One of the quickest ways to find education specific sites is to use a search engine such as HotBot (www.hotbot.com) or Yahoo (www.yahoo.com) and search for "schools" (elementary, middle, or high). You'll be amazed at what you'll find. (A list of search engines is in the appendix.)

The next step might be going to one of the web sites devoted to HTML and web issues. A recommended first visit is to a division of Yahoo. Go to the main page (www.yahoo.com), select Computers and Internet, then WWW, and finally HTML@. You'll have more information than you'll ever be able to use.

In the final analysis, a web site for a classroom is an effective communication tool today. As such, a commitment must be made to maintaining the site so that it is an accurate and positive representation of you and your classroom. Although the editors mentioned previously will make the task much easier than it was only a year or so ago, it still takes time to keep a site current. If the site is updated no more than once or twice a year it will be ineffective. Once the initial site is published the site maintenance should require much less time. You don't have to redo everything but a sense of currency must be there. It has been estimated that a "web year" for commercial sites is now down to a mere six months. Thus, if it's older than six months it's woefully outdated. And, this time frame is shrinking rapidly. So, if it's worth doing, it's worth doing right, and the time invested will pay huge dividends.

Points to Remember

1. Plan the site carefully, and keep it simple; overly complex sites are Confusing and unnecessary.
2. The content of the site should focus on the students, their work and classroom, and the school.
3. The use of white space, choice of fonts, and contrast can contribute to clarity, and may serve to frame important elements.
4. The use of a theme, consistency, color, and icons selection may all contribute to the site.
5. The site should be easy to navigate from one place to another.
6. Avoid "one large document," and try to get the viewers attention quickly.
7. Graphics should be relevant to the content of the site.
8. Be judicious in your use of color.
9. Be sure to identify the webmaster and the webmaster's e-mail address.
10. Include the date of the most recent revisions to the website.
11. Make sure the website is ready/complete before going on-line.
12. If you provide hyperlinks to other sites, be sure to check them periodically to insure that they are still working sites.
13. When you need it, get help.
14. Keep the site current and up to date.
15. Be sure to spell check and proofread everything.

APPENDIX

Free Web Graphics

beseen.com/beseen/free/webgfx.html - brought to you by Being Seen.

futuresystems.com/zeldazone/ze04000.htm - Zelda's free graphics: LeechWare!

www.hylegrove.com/custom.htm - Kristens Icons & Images.

www.webwisedesigns.com/library.html - Web~Wise Designs.

www.ami.net/users/familyofartists/graphics.html - free web graphics from Christopher Scott.

www.robinsfyi.com/graphics.htm - numerous links to other sites related to web construction and graphics.

home1.swipnet.se/~w-12094/ - Brimsan's free web graphics.

http://www.geocities.com/SoHo/7554/downloads/graphics/ - Free web graphics by JandaWeb.

mccannas.com/index.html - Laurie McCanna's Free Art Web Site offers Photoshop and Corel tips, and samples from her book, Creating Great Web Graphics.

www.abstract.simplenet.com/backgr.htm - backgrounds and other GIF's.

Search Engines

AltaVista - www.altavista.com

Excite - www.excite.com

HotBot - www.hotbot.com

InfoSeek - www.infoseek.com

Lycos - www.lycos.com

Metacrawler - www.metacrawler.com

Starting Point - www.stpt.com

WebCrawler - www.webcrawler.com

Yahoo - www.yahoo.com

www.searchenginewatch.com/facts.htm - Search Engine Facts & Fun - This section of Search Engine Watch provides background about search engines, tips on how to use them better, some history, and even a game to test your knowledge.

Sites Related to HTML Editors

AOL Press - www.aolpress.com - This free distribution is AOL's gift to the Web community. The creators of AOLpress are driven by a desire to simplify Web publishing. AOLpress was designed both to make WWW authoring more accessible to beginners and to save valuable time and effort for professional Web publishers.

BEST COPY AVAILABLE

Adobe PageMill 2.0 - www.adobe.com/prodindex/pagemill/overview.html - Both Mac and Win95 versions. Windows version is fully functional, but will time-out 15 days after installation. The Mac version does not save files. Windows version includes Adobe PhotoShop LE; Mac version includes Adobe SiteMill.

Claris HomePage Student Guide - www.claris.com/k12/solutions/clarispage/ - A step-by-step guide for creating a home page with Claris HomePage. Beta version of version 3.0 can be downloaded from: www3.claris.com/products/claris/clarispage/chpbeta_hdr.html

Microsoft FrontPage - www.microsoft.com/FrontPage/productinfo/default.htm

TUCOWS - www.tucows.com - This is a huge collection of software, both freeware, shareware, and demonstration, and includes numerous HTML editors and accessories for both the Mac and PC platforms.

John D. Foshay, M.S., M.A.
West Virginia University
Morgantown, WV

A BEE SEES ITS NEW HOME

Curriculum for students with moderate mental retardation at the high school level includes functional vocational training and community integration. At Hampshire High School, located in a rural West Virginia county, students participate in a program that involves both of these educational practices. At the school, instructors in a course called "Adaptive Horticulture" use the activity of the construction of specially designed bee homes to provide students the opportunity to practice important skills.

Within the context of manufacturing these special bee homes, students use a variety of common hand tools. This includes tape measures, electric stapler, hammers, saws, and drills. The activity integrated a number of academic skills such as counting, checkbook keeping, and word processing. It also involves community based skills such as banking an shopping. The opportunity to work cooperatively with peers as will as with participants in the bee home project strengthens interpersonal skills. The project also values intrapersonal skill such as being to work on time, treating others with respect, concentrating on the job and taking pride in a job well done.

The job associated with the construction of the homes arose out of necessity. A nationwide mite infestation problem had stuck the honey bee population, the mites decimated the honey be numbers and rendered many of them incapable of pollination. One potential solution involves substituting varieties of the mason bee species for the mite infested honey bees. Members of the mason bee species differs from the honey bees because they are not hive dwellers, rather, they live in holes in trees. Mason bees are more efficient pollinators per acre than honey bees and naturally occur in the United States. Most importantly they show an immunity to the mite infestation problem. The Adapted Horticulture class help to implement the use of mason bees as a potential solution to the honey bee mite epidemic.

Initially, the instructors had brought together several key participants in the project: the students of the "Adapted Horticulture" class, Gary Shanholtz of Shanholtz Orchard representing the Hampshire County Fruit Growers Association, Bob Cheeves representing the Hampshire County Extension Service, and Dr. Patrick Porter of West Virginia University. Dr. Porter, an expert in integrated pest management, in turn had an association with the United States Department of Agriculture (USDA), which eventually would supply Hampshire High with mason bees.

Next, the instructors of the Adapted Horticulture class wrote a mini-grant of $125 to purchase materials for the construction of the bee homes. Students spent the money in town during community training trips to the local hardware store. Then the class began to build the homes from plans provided by Dr. Porter's contact with the USDA.. As students finished homes, local members of the Hampshire County Fruit Growers Association cam to school to meet the students. The students loaded up the orchardists' trucks with boxes of bee homes, collected a check for the purchase of the homes, and socialized with the fruit growers for a short time.

This practice went on for six weeks, the time which students continued to purchase materials, cash the checks at the bank and build homes, until the class improved the design of the homes. The design evolved into a type of home that the students termed a "tube home". The tube home , currently in production, uses pre-made paper tubes, PVC pipe and wire hangers. Although more expensive than the original design, students assemble the tube homes more efficiently and the tube home fits into the future of the project because it more readily accepts the dormant bees received from the USDA. This factor is critical since as the program continues into its second year the attention of the project is turning toward propagation and distribution of bees. In its second year continued support from all involved parties has helped make the project a "win-win" situation for everyone!

One event related to the construction of the bee homes that seemed rewarding to the student in the program occurred when a television crew from West Virginia University's Department of Radio and TV cam to film the project. The resulting 10 minute video production, which included sequences of students working on the construction of homes and interviews with staff, aired on earth TV, a satellite channel. The video and the ACRES paper serve to inform other about the honey bee mite infestation problems as well as sharing with other educators how students in rural American schools can provide a service to their communities while simultaneously practicing important vocational, interpersonal, and academic skills.

Shu Jen Chen
Oklahoma State University
Stillwater, Oklahoma

Labeling and Classification

Abstract

Our labels influence children's whole futures which determine the structure of human society. Each unique different individual has the right to claim to be respected as a human being as far as his/her identity and existence are concerned. As educators, we all assume that we teach according to each individual student's level and need. However, what criteria do we use to assess each individual student's true need and give a label, and then teach accordingly. Are the criteria appropriate and unbiased so as to result in the true need diagnosed to be required by the student not by the professionals themselves? All educators, especially both regular education teachers and special education teachers, should be more aware of this issue.

A. Introduction: Why is the old topic brought up again?

Labeling and classification is an old topic and every educator is aware of misidentification because of language and culture differences, but how much awareness does one have? All human beings unconsciously share one common mistake. That is, all people tend to intuitively use their limited knowledge, vaule, and experience as personal criteria to make a judgement about other people or something which we are not quite familiar with. As a result, misunderstanding occurs. Misunderstanding decreases as how much one knows about the new objects being studied. Among the new objects, culture misunderstanding is a big issue. In other words, if there is any culture shock exists, there is misprediction resulted in misidentification. What's worse, the right "prescription" can never be given due to "misdiagnosis" as far as teaching is concerned. Thus, an elite becomes a scapegoat of one's ignorance and a victim of another culture. Likewise, culture differences aside, if the nautre of one's disability can never be understood well, such an individual becomes the product we shape. There is no denying that misidentification is still going on in today's society. Bedell (1989) stated that a very high percentage- perhaps as high as 41% - of all special education students are from culturally divergent backgrounds. MacMillan, Gresham, and Siperstein (1993) expressed their concern regarding the overrepresentation of students of color in groups labeled as having disabilities. As long as the populations from culturally or ethnically diverse backgrounds are growing rapidly due to increasing birthrates and immigration levels, the need of calling for caution in dealing with the issue of labeling and classification is inevitably important. According to Miller and Miller (1996), U.S. Bureau of the Census reported that from 1971 through 1980 there were 4,493,000 immigrants; while from 1981 through 1990, there were 7,338,000 immigrants. (See Appendix 1)

B. The Significance of Labels and Classification

a. What are labels?

Labels are names. Labels are identity that everything can distinguish one from another. Socially and educationally, labels are unavoidable. Accordingly, we have ethnic labels - Hispanics, Asians, Caucasians, Americans, American Indian Tribes - Cherokee, Apache, Choctaw, etc.; we have political labels - the Republican Party, the Democratic Party, the Labor Party, Communist Party, etc.; we have food labels - Total Raisin Bran, Sunsweet Breakfast Prunes, Aunt Jemima Pancake & Waffle Mix, etc.; we have home appliances labels - Kenmore Refrigerators, Bradford White Water Heaters, Superthrust Air Conditioners, etc.; we have title labels - Ambassador Jones, Senator Clinton, Judge Harley, Father Husbands, etc.; we have educational labels - LD kids (Learning Disability), students with SED/BD (Seriously Emotional Disturbance/Behavioral Disorders), students with MMR (Mild Mental Retardation), Gifted and Talented students, ESL (English as the Second Language) students etc.; and we have individual labels - Allen, Arthur, Margaret, Rebecca, etc.

b. Are labels and classification necessary?

Since nothing is identical in the world, we intuitively assume that everything is different and unique. When we see oranges and apples, we differentiate them without a second thought; we simply do not mix them up. When we see an American and an Arabic, we are innately aware that their skin colors, languages, cultures, religions and thoughts are totally different. In order to distinguish each other, we need names for each individual object. Socially, labeling may be a stereotype. It may be a price tag that we put on every individual to show how much value one has. Each person carries a label to represent what status one has in the human society. We are naturally differentiated and ranked in the human society. For instance, we may show more respect to a court judge than to a Burger King counter boy. Labeling is inevitable in the universe despite its harm and controversy.

Educationally, labeling is necessary, too. We label our students just for the sake of the convenience for teaching. All educators know we have to teach every individual student according to his/her background, level and need, so we can motivate him/her to learn with appropriate approaches. For example, we don't teach English to native speakers the same way as we teach ESL students though the ultimate goal is the same - we want all of them to be successful in using the English language.

Since we classify, we put objects in categories, then give them labels. As Hobbs noted in 1975, "Classification and labeling are essential to human communication and problem solving; without categories and concept designators, all complex communicating and thinking stop" (p. 5). In addition, he put, "Categories and labels may open up opportunities for exceptional children, facilitate the passage of legislation in their interest, obtain appropriate funds, design service programs, evaluate outcomes, conduct research, even communicate about the problems of the exceptional child.... Classification is essential to providing services for children, and a label may be a child's ticket to getting help. Without a label he may get no help. With one, he may, if he is lucky and if his parents work hard enough at it, get good help or at least some help" (p. 3, 13-14).

C. The Effects of Labeling and Classification

Labels and classification can profoundly affect what happens to a child. On the one hand, it can open doors to services and experiences that the child needs to grow in competence, to become a person sure of his/her worth and aware of the worth of others, to live with enthusiasm and to know happiness. On the other hand, labeling, classification or inappropriate labeling, classification, or failure to get needed classification can blight the life of a child, reducing opportunity, diminishing his/her competence and self-esteem, alienating him/her from others, nurturing a meanness of spirit, and making him/her less a person than he/she could become. Nothing less than the futures of children is at stake.

a. Examples of positive effects in teaching ESL students

In teaching ESL students, first, we need to identify their levels and backgrounds. Then, we apply the theories of language acquisition or language learning, for teaching language to adults and children is a totally different version. Children are able to do the unconscious learning without grammatical rules, while adults have to do the conscious learning through grammatical rules. In other words, children are able to acquire (pick up) the language, while adults are unable to acquire the language, instead, they learn the language. Chomsky (1968) had dismissed the cognition-first notion of Piaget's language acquisition. "The child acquires language ... at a time when he is not capable of complex intellectual achievement in many other domains. The achievement is relatively independent of intelligence or the particular course of experience" (p. 66).

Theoretically and empirically, if a child is under 7 years of age, we prefer to expose him/her to a natural first language environment. However, in teaching ESL students who benefit best from conscious learning, we like to categorize them in levels, so we can design an appropriate program according to their needs to facilitate their learning. Thus, in most language schools in Taiwan we have programs K1 through K12 for children (8-13 years old) and programs in different levels of conversation, writing, reading, listening comprehension, etc. for adults. We like to use flash cards, maps, visual aids and different interesting games (baseball on the board, ghost buster, Simon says, etc.) for children and we tend to like to do pair work or team work for dialogs or pattern exercises and show digraphs, tables, charts, etc. (shown in Appendix 2) of English speech sounds or symbols for adults. In teaching College English majors, we even need to offer them more language theories, characteristics of each English speech sounds in details (shown in Appendix 3), a comparative analysis in sounds (shown in Table 1) and writing practices through levels (paragraph, controlled and guided composition with pictures or with a topic sentence, and creative free writing).

Table 1

Mandarin Phonetic Symbols	Yale System	Mandarin Phonetic Symbols	Yale System
ㄅ	b	ㄎ	k
ㄆ	p	ㄏ	h
ㄇ	m	ㄐ	j(i)

ㄈ	f	ㄑ	chi
ㄉ	d	ㄒ	s(i)
ㄊ	t	ㄓ	j
ㄋ	n	ㄔ	ch
ㄌ	l	ㄕ	sh
ㄍ	g	ㄖ	r
ㄎ	k	ㄗ	dz
ㄤ	(ng)	ㄘ	ts
		ㄙ	s

(Liang, 1982)

As ESL teachers, we are even more aware of sentence errors because of culture differences in the mother tongue and second language. That is, sentences are made according to the interpretation of the ESL student's language expression. As a result, it is always that sentences are made grammatically correct but semantically incorrect or inappropriate in the target language. Examples are shown as follows:

1. A: I got a brand new Benz.
   B: That's really amazingly handsome! 帥呆了!
   (* B's expression intended: That's cool!)

2. A. Let's go to see a movie.
   B: No, I can't. I'm in a bad mood. I just broke up with my girl friend last night.
   A: Come on. Where there's earth, there's fresh grass. 天涯何處無芳草.
   (* A's expression intended: There are lots of fish in the sea.)

3. A: May is really too spoiled.
   B: I don't blame her because she is the bright bead in her father's palm. 掌上明珠.
   (* B's expression intended: She is an apple in her father's eye.)

4. I don't like him. He has an old k face. 他有老K臉。
   (* expression intended: He has a poker face.)

5. A: Hey, watch the beautiful legs of that chick.
   B: Hi, buddy. Watch your language. Don't eat my girlfriend's tofu. 不要吃我的女朋友的豆腐.
   (* B's expression intended: Don't get fresh with my girlfriend.)

b. Negative effects of labeling and classification

Stainback (1996) pointed out, "Disability labels are ideas not facts. We create or construct them and we do so within particular cultural contexts. As a consequence, definitions of disabilities are always in flux, constantly being redefined or modified, and certainly not static, objective, natural or a given. A number of serious problems with disability labeling such as fostering stereotyping attitudes and actually blocking the essential agenda of good teaching" (p. 83). Classification of a child can lead to his commitment to an institution that defines and confirms him as delinquent, blind, retarded, or emotionally disturbed. The institution may evoke behavior appropriate to his label, thus making him more inclined to crime, less bright than his talents promise, more disturbed than he would be in a normal setting.

Fairbanks (1992) also mentioned in her article, "Too often, the school system regards students who do not learn quickly enough or in a conventional manner as deficient, and labels them in ways that keep them from joining in a dynamic learning process" (p. 475). She told of the determination of a young man, Glenn, to overcome his "learning disabilities" label and of the consequences the labeling process had on his school life. Glenn's story (His parents agreed with the school that he was unable to go to college and a vocational school might be better option for him. He refused their recommendation and strove for reaching his goal. Finally he made it.) illustrates an overwhelming need to reevaluate our educational practices for learning disabled students. Westbrook and Sedlacek (1991) noted, "...despite increased concern for minorities in the literature, the labels used to describe them may have done much to exacerbate problems" (p. 20). Some special education experts (1995), like Wang, Reynolds, and Walberg, strongly urged that students at the margins may be at risk, learning disabled, low-achieving or gifted and talented. By dispensing with labels and other traditional approaches, we can help them all.

Kirkman (1991) stated that schools exclude children in care more often than other pupils because they believe that no one will challenge their decision. Social workers can be to blame for under-achievement for children in foster care. "They tend to see youngsters as psychological cases instead of normal children with problems" (p. 64). She criticized social workers and teachers who shy away from pushing children to do well because they are afraid of imposing extra pressures. She added, "If a child starts succeeding at school, its self-esteem may grow" (p. 64). Fink (1992) questioned schools for being inadequately restructuring categorical programs. He said, "We empowered the schools to group and serve students according to their instruction needs, not their labels and funding sources" (p. 42). He preferred an integrated special, compensatory, and basic education service delivery model that would proved effective instruction for all students. Savitch and Serling (1995) emphasized that children who are gifted and mainstream, ESL and native-speaking, boisterous and shy come together in school to share talents and needs and to prepare for life outside the classroom.

D. Assess Assessment

As mentioned in A. Introduction, all people (either professionals or non-professionals) tend to use thier limited knowledge, value and experience, in terms of personal criteria or professional criteria, to make a judgement about new objects and people. The difference between personal and professional criteria is professionals tend to use more secientific ways- collecting more data, using standardized tests, norm-referenced tests or criterion-referenced tests, keeping class observation records, etc.to try to make a more objective judgement about objects or people being studied. However, do professionals or educators still fail to evaluate a student's true ability? First, let's talk about why we assessed/assess students and what teachers should know about assessment according to professionals (disscussed in a.), then we'll focus on this issue (discussed in b.).

a. Why and what do teachers need to know about assessment?

According to Popham (1995) who has been a teacher for over 30 years, teachers who can test well will be better teachers. Effective testing will enhance a teacher's instructional effectiveness. Tests, such as quizzes and examinations, share one thing in common - they all represent the teacher's attempt to get a fix on how much the teacher's students have learned. Historically, they have been paper-and-pencil instruments. As human beings, we make all sorts of informal determinations regarding people's status. For example, we may conclude that the man who cut into the line for ice cream is rude. But it is an informal status determination. Teachers, too, make informal judgments about their students. For instance, a teacher might conclude that a student who seldom talks in class knows little about the subject. Such informal appraisals, although they May be useful to teachers, should not be regarded as educational assessment. The kind of educational assessment you'll be considering is more than a teacher's "impressions." Assessment, therefore, is a broad and relatively nonrestrictive descriptor for the kinds of testing and measuring that teachers must do. It is a descriptor to help remind educators that the measurement of students' status should include far more than paper-and-pencil instruments. Assessment is a word that embraces diverse kinds of tests and measurements.

Traditional Reasons that teachers assess students were:

1. to diagnose students' strengths and weaknesses
2. to monitor students' progress
3. to assign grades to students
4. to determine instructional effectiveness.

Today's reasons for teachers to know about assessment are:

1. because of the use of test results in determining public perceptions of educational effectiveness
2. due to the increased use of students' assessment performances as part of the teacher evaluation process
3. because assessment devices, as classifiers of instructional intentions, can improve instructional quality.

All teachers need to know how to:

1. construct and evaluate their own classroom tests
2. interpret results of standardized tests
3. prepare students appropriately for classroom and high-stakes tests

b. Does our testing or assessment truly evaluate students' abilities?

Current research shows that teachers have biases based on gender, race/ethnicity, and disability and that their interactions with students are influenced by these biased expectations. All teacher interaction, such as discipline, physical proximity to students, grading, etc., are influenced by these attitudes. Froschl and Sprung (1988) suggested that educators first be sensitive to disparities in the classroom and then provide staff development to help the teachers become aware of how classroom management and unconscious attitudes can contribute to inequities. (The Gender/Ethnic Expectation, Student Achievement (GESA) model and staff training, available from the Los Angeles County Schools in Los Angeles, California, is a highly effective program that enables educators to provide more equitable attention to students.)

The concept of equity in assessment implies that assessment practice and interpretation of results are fair and just for all groups (Gipps and Murphy, 1994). Thus, assessment consider not only the practices of assessment but also the definition of achievement, while at the same time recognizing that other factors (pupil motivation esteem, linguistic and culture backgrounds, teacher behavior and expectation) also come into play in determining achievement.

As educators, we tend to like to be very objective in evaluating each individual student's ability and assessing his/her academic performance. Thus, we might collect, try to comprehend as many resources or theories for educational equity as possible, and be aware of students' language and culture differences. However, we might still fail to achieve equity and truly report each student's ability and performance. The reasons could still be:

1. Understanding the languages and cultures of the minorities group, like Mexican Americans, Latin Americans, African Americans, Asian Americans, etc. is almost impossible or may be a catch-22 problem in the US. multiculture, which is full of challenges, in one's life span. For example, language or culture misunderstanding can have a great impact on an individual's judgment which results in a bias. Here is an old interesting story about language misunderstnading which led to a misjudgement.

   > A rich old Chinese lady first came to the US. with a tour group some years ago. Because of an emergency and non-exposure to English, she used the man's bathroom instead. Being alone in the bathroom, she was terrified. Then, she left the door open when using the toilet. Unfortunately, one young man came. He was so embarrassed and said, "I'm sorry," when the scene first came into his sight. The lady, certainly, screamed as much as she could. However, after she cooled down herself, she said," The man was still not so bad because he did not try to rape me. Instead, he simply tried to advise me to close the door. (She misinterpreted, "I'm sorry," as "Why don't you close the door?" in Taiwanese.)

2. Teachers overinterpret the results of tests, such as Standford-Binet, Weschler Intelligence Scales, etc. Also, according to Gifford (1989), externally mandated tests (typically the standardized achievement test batteries, including tests administered from outside the school district and tests imposed on classroom teachers by the school district) are used to describe and compare not only individual students, but their teachers, schools, districts, states, and even the nation as a whole. Each of these tests has some justification, and is of some value. Often, however, the negative consequences of all this testing go unrecognized, and the potential benefits go unrealized because test data are used in thoughtless or inappropriate ways. Externally mandated tests include minimum competency tests (MCTs),

which must be passed to earn a high school diploma; standardized achievement tests; and even some tests that students take at their own initiative, especially the Scholastic Aptitude Test (SAT) and the American College Testing Program (ACT) examinations. They include the advanced Placement (AP) tests set by the College Entrance Examination Board (CEEB), through which students successfully completing high school AP courses may earn college credits; and in some states, tests like the New York Regents examinations, which may entitle students to a more distinguished diploma. Externally mandated tests also include the California Assessment Program (CAP) and other state testing and assessment programs used for school or district-level comparisons and sometimes used to tack state-level achievement trends over time. These and other externally mandated tests influence what is taught and how it is taught in ways that are beyond the control of classroom teachers.

E. Conclusion: All educators have nothing to turn themselves great but something enriched within to change the world.

Assessment leads teachers to place their students in categories (classification) then to put labels on each categories (labeling). Teachers, hence, give instructions to their students according to labels assumed to be students' levels and needs. Our labels influence children's whole futures, as educators, how can we not too be careful in evaluating our students? Since labels are identity, the elimination of labels is most unlikely. However, since they have been a big controversial issue in recent years, in my opinion, we should try to reduce as many labels as possible. In addition, we should try to give good labels instead of bad labels on individuals, for good labels are those that a parent can use to open doors for his child and maximize chances of marshaling resources on his behalf. Bad labels are those that closed doors to the child, that place him/her in inferior programs or subject him/her to unpleasant or humiliating experiences and attitudes..For example, we may consider to use MC (mental complexity) for MR (mental retardation). Moreover, as many experts notice that if possible, we could label programs rather than people for a change. Furthermore, as educators, we should emphasize teaching morals- never say "no" and always look for possibility in every impossibility (refer to the real story in the movie, Lorenzo's Oil, 1992). The saying, "Strike while the iron is hot," indicates that everything can be shaped as long as we know when, why and how. Each individual with disabilities or non-disabilities can achieve what he/she wants to be as long as he/she is willing to make efforts and we educators know how to trigger each individual and maximize his/her potential. All educator have nothing to turn themselves great but an engine within which sparks each one to spontaneously and unceasingly explore knowledge(exploring what is unknown to the self), always question and try to get answers in different standpoints. In this case, the negative effects of labeling may be much reduced and each individual may really benefit from education due to appropriate teaching methodology obtained from the teacher's true diagnosis and prescription.

Bibliography

Bedell, F. D. (1989). Communication Disorders in Multicultural Populations. Stoneham, MA: Andover Medical Publishers.

Chomsky, N. (1968). Language and Mind. New York: Harcourt, Brace & World.

Fairbanks, Colleen M. (1992). "Labels, Literacy, and Enabling Learning: Glenn's Story." Harvard Educational Review. 62, 475-493.

Fink, Stephen. (1992). "How We Restructured Our Categorical Programs." Educational Leadership. 50, 42-43.

Gifford, Bernard R. (1989). Test Policy and Test Performance: Education, Language, and Culture, Massachusetts: Kluwer Academic Publishers.

Gipps, Caroline and Murphy, Patricia. (1994). A Fair Test? Assessment Achievement and Equity. Buckingham, MK: Open University Press.

Hobbs, Nicholas. (1975). The Futures of Children: Categories, Lables, and Their Consequences. California: Jossey-Bass, Inc., Publishers.

Kirkman, Susannah. (1991). "Labels That Must Be Peeled Off." Times Educational Supplement. June, 8.

Liang, Shih Chiu. (1982). A New Practical Chinese-English Dictionary. Taipei: Taiwan: The Far East Book Co., Ltd.

MacMillan, D.L., Gresham, F. M., & Siperstein, G. N. (1993). "Conceptual and psycholmetric concerns about the 1992 AAMR definition of mental retardation." American Journal on Mental Retardation, 98, 325-335.

Mercer, J. R. (1973). Labeling the Mentally Retarded. Berkeley: University of California Press.

Miller, Willard E & Miller, Ruby M. (1996). United States Immigration: A Reference Book. Santa Barbara, California: ABC-CLIO, Inc.

Owens, Robert E. (1984). Language Development. Ohio: Merrill Publishing Company.

Popham, W. James. (1995). Classroom Assessment: What Teachers Need to Know. Mass.: Allyn & Bacon.

Savitch, Julie and Leslie Serling. (1994). "Paving a Path Through Untracked Territory." Educational Leadership. 52, 72-74.

Stainback, William and Stainback, Susan. (1996). Controversial Issues Confronting Special Education. Boston: Allyn and Bacon.

Wang, Margaret C., Reynolds, Maynard C., and Walberg, Herbert J. (1994). "Serving Students at the Margins." Educational Leadership. 52, 12-17.

Westbrook, Franklin D. and Sedlacek, William E. (1991). "Forty Years of Using Labels to Communicate About Nontraditional Students: Does It Help or Hurt?" Journal of Counseling & Development. 70, 20-28.

Wise, H. S. Introduction to Phonetics. (1958). Englewood Cliffs, J.J.: Prentice-Hall, Inc.

Lawrence Ingalls, Ph.D.
University of Texas at El Paso (UTEP)
El Paso, Texas

Project LISTOS: A Bilingual Special Education Program

This project, entitled "Language Interface for Special Teachers of Our Students" (LISTOS) is in its second year of operation. Through this preservice project, participants of the project (teachers) have focused on developing skills for working more effectively with linguistically and culturally varied students in special education programs. This graduate program was designed to recruit and train graduate level teachers to work with students who are experiencing difficulty in school and who have or might have a disability. The program was developed to meet the needs of teachers who have traditionally experienced difficulty in working with this group of students.

Project LISTOS has a common philosophy that states there are general strategies that can be used to help those students with disabilities who come from culturally and linguistically different backgrounds. Within the scope of this project, specific strategies are taught to teachers and then applied to various teaching situations regardless of a student's language or ethnic background. Therefore, Anglo, Hispanic, Apache teachers are taught similar teaching principles to use to assist the students for whom they teach.

Two groups of participants were selected to work on this personnel preparation project. The groups consisted of two neighboring Apache Reservations and several rural and urban school districts serving Hispanic students. The teachers on the Apache Reservation focused on developing good teaching strategies that are appropriate for their Apache students. The teachers within the El Paso region focused on developing good teaching strategies for the students within the area schools which included predominately Hispanic students. Several times throughout each of the project years all of the teachers from both groups met together to discuss commonalties and differences amongst their teaching practices of students in their classrooms and schools.

One major activity and accomplishment of this project was the opportunity provided to all project participants to attend two national training conferences. The cohort of participants attended the National Association for Bilingual Education (NABE) Conference in the Spring of 1997 and also attended a four day training conference from the BUENO Center of the University of Colorado in the Fall of 1997. Throughout both of these sessions the cohort was able to discuss together strategies that have been supported by national scholars.

Several trials and tribulations have been encountered by this project. Within this presentation such concerns as gaining tribal support from the Apache communities to overcoming some of the difficulties of long distance learning will be shared. Project LISTOS has developed many innovative practices that can assist higher education personnel when dealing with rural communities.

Project LISTOS, now in its second of the three years of funding intends, to train and graduate over fifty master level teachers with specific skills in bilingual special education. The University of Texas at El Paso intends to institutionalize the courses and the degree track allowing for this degree to continue to be available to students in this area.

Joe Nolan, Texas A&M- Corpus Christi, Corpus Christi, Tx.

The Transition Planning (ITP) Process for Secondary Students with Severe Disabilities
A pilot focus group project comparing urban and rural populations.

The coordination of school-based transition services requires the participation of a diverse group of people in order to bring about a successful post-school adjustment for the student. Inadequate planning and follow-up training can have a drastic impact on the individual. Reiter and Palnizky (1996) found that one third of special school graduates were not working, nor enrolled in formal training 6 months after graduation. Gallivan-Fenlon (1994) discovered eight major traits which inhibit successful transition from school to adult life:

1.) Differing future expectations for young adults with disabilities
2.) Inconsistent implementation of special education curriculum and lack of inclusive educational practices.
3.) Lack of transition related knowledge.
4.) Hastily and poorly coordinated transition planning.
5.) A prevalence of restrictive views on employment and community living opportunities for adults with disabilities.
6.) Low levels of family participation.
7.) Outcomes of unemployment and isolation for most young adult participants.
8.) Significant benefits of supported employment and community inclusion

Problem:

The Individuals with Disabilities Education Act (IDEA-P.L. 101-476) as amended in 1997 by P.L. 105-17 requires a Transition Plan (ITP) as a component of the already mandated Individual Education Plan (IEP). This plan is required for all students 16 years of age or older (14 for individuals with Autism). It should be developed in concert by the student, parents, friends, teachers, administrators, related services personnel, vocational personnel, and representatives of pertinent outside agencies (e.g. MHMR, state rehabilitation commission, state employment commission). While many school districts have full time transition specialists, many do not. This is especially true in rural areas. In those areas who do not have a well informed transition specialist on staff, many school district personnel, related service providers, outside agencies and parents find themselves unaware or confused about the roles and responsibilities of each party in the Individual Transition Planning process. In the case of the student with severe disabilities, the ITP is often "glossed over" by administrators assuming the child to have limited prospects upon graduation.

Purpose:

This pilot study explored the parents' awareness of transition planning, and their perceptions of the responsible parties. Additionally, the parents were canvassed to establish possible transition areas currently not part of the Individual Transition Plan that warrant consideration into the planning process. The information obtained in this study will be used to increase awareness upon all parties of the needs of the student with severe disabilities and their responsibilities to that student in the ITP process.

Method:

The participants of the first focus group were parents of individuals with severe disabilities who are 16 years of age or older. The students were a mixture of those who live at home and residents of a intermediate care facility in South Texas. The composition of the group was a mixture of residents of both urban and rural areas. This focus group was interviewed using a specific questioning route.

Additionally, information was drawn through structured interviews with rural and urban special education directors. Finally, teachers were canvassed at three meetings, two in rural areas and one in a urban school district. This canvass consisted of a brainstorming session which posed the question: "What are the primary problems of the Individual Transition Planning Process"?

Results:

These findings were reported from all parties concerned:

A.) There was no representation from outside agencies at ITP meetings.
B.) The meeting was treated as "just another form to fill out".
C.) IEP committees tend to offer only what they currently have available.
D.) Referral to community agencies were not made.
E.) Few employment opportunities, those available were in stereotypical areas.
F.) Few leisure activities existed outside of Special Olympics.
G.) Instruction not generalized.
H.) A dichotomy exists between full inclusion and receiving the special education services required for successful transition into the community.
I.) Students not trained emotionally to cope with the insensitivity of other students and the community at large.
J.) There needs to be more information provided on guardianship and other legal implications.
K.) Improvements need to be made in the communication between the school and parent.
L.) No parental involvement.
M.) Not enough time to hold productive meetings.
N.) Parents unaware of resources available.
O.) Lack of motivation on the part of school personnel.
P.) Role confusion among all parties.

Discussion:

An examination of the above problems indicates that they can either be solved or mitigated by concentrating efforts in three major areas:

1.) Communication, networking and/or research.

2.) Training and/or clarification of roles and responsibilities
3.) Enlisting community involvement and administrator support

The next phase of this study will be designed to concentrate on those areas.

Future Actions

A collaborative project between Region 2, Educational Service Center, Texas Education Agency; and Texas A&M - Corpus Christi had approached the above mentioned problem areas by setting the following objectives to be met by June, 1999:

A.) To develop an understanding of all parties concerned of their responsibilities in the Transition Planning and Training process.

B.) To develop an understanding of the similarities and differences between urban and rural school districts in transition planning and support.

C.) To increase parent and student awareness of the services and training available.

D.) To develop relationships between school districts and local businesses with the goal of cultivating employment opportunities for students with disabilities.

E.) To develop awareness of the importance of the domains (leisure/recreation, social, education, personal independence, etc.) in transition planning.

Summary

The effort to increase communication and understanding among the parties involved in transition planning in training will involve shifting paradigms and consequently, will not be easy. By taking the first two steps which include defining roles/responsibilities and increasing understanding of those roles through training, that major improvements will come in the process. Any improvement in this process will greatly enhance the future of secondary students with disabilities.

References

Gallivan-Fenlon, A. (1994). " Their senior year": Family and service provider perspectives on the transition from school to adult life for young students with disabilities. Journal of the Association for Persons with Severe Handicaps, 19, (1), 11-23.

Reiter, S. & Palnizky, A. (1996). Transition from school to work of students with developmental disabilities and mental retardation: an Israeli perspective. International Journal of Rehabilitation Research, 19, (1), 27-38.

Pauline J. Holloway, Ph.D.
Oklahoma State University
Stillwater, OK

Charolotte Myles-Nixon, Ph.D.
University of Central Oklahoma
Edmond, OK

Wanda M. Johnson, Ph.D.
University of Central Oklahoma
Edmond, OK

IDENTIFICATION, DIFFERENTIATION AND INTERVENTION OF THE DEMOGRAPHICALLY DIVERSE FOUR YEAR OLD, STRATEGIES FOR RURAL SPECIAL EDUCATION

The catalyst for this study, is the increased interest in early intervention approaches for kindergarten children who lack readiness skills for first grade. This study is necessary and important in that it expands the current focus on purely cognitive developmental domains of readiness, to include the areas of socialization and behavior of pre-school children. However, there is a high probability of misinterpretation of information in such demographic- and/or cultural-based domains.

This probability becomes of primary concern for two reasons: (1) National statistics cite recent shifts of populations from large metropolitan states and cities to rural areas, and, (2) information based on observations may lack the cultural.differentiation-factor needed for effective decision-making. Behaviors, basic to learning, of preschool children that are cultural- and situation-based, are identified and acknowledged as in danger of misinterpretation.

Head Start is a federal discretionary grant program with a long history of providing comprehensive child development and support services to young children and families with incomes at or below the poverty level. The four-year program is and early childhood programs offered in addition to, rather than supplement the federally sponsored Head Start programs.

The rules and regulations, in brief, for Early Childhood Education Programs for Four-Year-Olds consists of eleven guidelines: (1) A child must be age four on or before September 1 of the ensuing school year, and shall not have attended a public school kindergarten; (2) Any teacher employed by a public school to teach in an early childhood education program shall be certified in early childhood education; (3) If a school district contracts with a private or a public provider, of early childhood education programs, other than a school district, the contract may only be continued if each teacher serving the school on and after January 1, 1993, is certified in early childhood education; (4) The number of children in a group shall not exceed twenty; (5) The school district shall ensure the teacher assistant is provided training in early childhood education; (6) A school day for a child consists of not less than two and one-half hours per session; (7) The program shall be designed to include four teaching sessions for the students and one session for implementing the parent program which includes planning, parent-teacher conferencing and development of materials; (8) The program shall establish a definite plan for implementing the parent program to support the child's education experience; (9) The learning environment shall a) be arranged in centers to provide for the individual and group learning experiences; b) be equipped with movable furniture of the correct size; c) have restroom facilities that will accommodate four-year-olds; (10) The early childhood curriculum shall be designed for four-year-olds; (11) Children who meet the qualifications for federally sponsored Head Start programs shall be entitled to attend free of charge and shall be given priority for acceptance into early childhood programs over children who do not meet the qualifications for the federally sponsored Head Start programs.

Subjects: The population used in the original study consisted of ethnically (African American) and geographically (inner-city) diverse four-year-olds, who, by the time the study began, had established residence in a rural environment. An ethnic group may be defined as an involuntary collectivity of people with a shared feeling of common identity, a sense of peoplehood, and shared sense of interdependence of fate. These findings derive, in part from a common ancestral origin, a common set of values, experiences, behavioral characteristics and linguistic traits that differ substantially from other ethnic groups within society (Banks, 1994).

The authors resolved that the original population, were subject to an overwhelming influential variable of an established rural residence. It was concluded that the students had either acquired behavior of that environment or suffered misinterpretation and mislabeling.

The study thus led in the direction of utilizing a "pre-migrant" population. A "pre-migrant" population authors define as culturally diverse, and whose present location are established in largely populated cities and areas, with "big city" behavior norms and diverse cultural norms. The National Center for Education Statistics reports a deluge migration trend, directly to rural areas. This population is without mass previous experience in rural areas, and exhibit culturally determined behaviors that may be rejected or labeled as inappropriate in an Anglo-Saxon culture and environment. The new focus of study utilized a four-year-old program in an urban school with a 99% African American population. The African American ethnic group was selected due to the high probability of mislabeling of behavioral characteristics and present overrepresentation in classrooms for the emotionally disturbed.

Twenty-four children from a metropolitan public school four-year old program were included in the study. Nine of the twenty-four children were identified as in need for intervention. Teacher nomination was solicited for confirmation that identified students may benefit from intervention.

Method and Design: Early screening elements vary widely and have been misleading or have failed to discriminate between behaviors that are culturally acceptable or situationally determined, or have failed to accurately predict unreadiness for formal school, due to social/emotional problems.

A screening device containing items sensitive to culture and demographic area was designed to ensure a more accurate differentiation between behaviors indicative of an acceptable cultural difference, and those that require intervention. Observational criteria are as follows: **Display of Emotion:** (the capacity to show joy, anger, sorrow, grief, enthusiasm, excitement and frustration). **Relationship Skills:** (lack of social competence, leading to playing alone, fearful of peers, or lacking confidence in self for meeting expectations of adults). **Play Skills:** (variation in play, inventive play, lacks security in play within the environment). **Response to Authority:** (general acceptance of authority, and adult demands). **Creative Skills:** (exhibits curiosity, pushes against perceived boundaries (on occasion). **Responsibility:** (becomes actively involved in activities, avoids passivity). **Problem Solving Skills:** (effectively interacts with small and large groups, admits wrong, forgives, and understands options or reaches independent solutions). **Freedom of Life:** (lacks prevailing fear that interferes with socialization, accepts new and different activities, and appreciates things and times of joy and excitement).

"Normal progression" in four-year olds has long been a comparative developmental issue with parents and educators alike. When criteria used to critique development is culturally and situationally determined, there is great danger in using a comparative approach, in that it results in inaccuracy in interpretation of behaviors. Sudden changes in a child's environment, and routine of peer interaction, can result in a problematic dilemma that is two-fold. First is teacher expectation, due to lack of a diverse cultural exposure and experience. Secondly, children of preschool age are particularly vulnerable to inappropriate feedback and actions. Many preschoolers have a hard time coping with frequent, rapid, changes in environments. When any given school system is suddenly faced with a surge of student population that is diverse in culture and geographic origin, invalid and inaccurate perceptions of social skills and behaviors of students may occur.

Two groups of four-year-olds were observed for a four-week period of time, during the play period, each day, per group. There are twelve students in each morning and afternoon group. Ethnicity and gender distribution in the morning group, were six African American females and six African American males. The afternoon group consisted of five African American females, one White female, and six African American males. Directive group play therapy was determined as the tool of intervention.

Standards for normal behavior are generally based more on what is judged acceptable in a specific setting than on judgments about how an individual performs on a test. It is hypothesized that rural school systems may judge members of a "pre-migrant" population as demonstrating "unacceptable" behavior, which may then be the basis for being identified as behavior disordered, or a behavior problems. Behaviors observed, (utilizing "play therapy"), established within an eight-point criterion, are more likely to be identified as unacceptable. These same behaviors are defined as to their characteristic cultural and demographic origins.

Display of Emotion:	Words used with intensity, and volume.
Relationship Skills:	Show of belligerence, aggression or complete submission.
Play Skills:	Utilization of toys as weapons fast paced play, high level of communication. (African American males displaying such behavior, are regarded as unruly, overly aggressive and difficult to manage, or as having hyperactive-like behavior labeled with an Attention Deficit Hyperactive Disorder (ADHD)
Response to Authority:	Occasional resistance of adult figures, defiance in attention or disengagement and humming.
Creative Skills:	Pries, peeks or snoops when asked to reframe, ventures without or prior to instruction, to the point of being mischievous.
Responsibility:	High activity level, even during focused activities, continuous attempts to interact in non-programmed activities.
Problem Solving Skills:	Attempts to control activity, or be in the spotlight. Voicing options and making commands. Expresses through behavior, a need to be "center-stage."
Freedom of Life:	Expresses desires for play and social activities that involve a high level of activity, sound and music. Frequent show of affection through touching or hugging.

Demographics associated with each criterion, evolve through play therapy when cars were "driven" fast, and its occupants were yelling harshly to other motorist. Through dramatic play, children are constantly in "traffic jams", and expressed being "late for work". Big busses were stopping on every corner, letting on lots of people going down town. Busses and cars were "putting out" lots of smoke.

Children spoke of "working hard" and taking care of their parents and little sister or brother. Some students made commands, and tasks were distributed to other students. Allocations were made with toys, and children talked about "going to Target, Block Buster Video, and 'the mall' to shop and going to birthday parties. A high level of activity and options of play were discussed.

Intervention: Play Therapy is an effective method when used to differentiate between behaviors that are culturally- or situational-based, and to identify those behaviors that are in need of intervention. While each individual case will require its own special intervention, Play Therapy is an effective means of intervention.

It should be understood that teachers, who are of a different ethnicity, living in a different demographic area than children being taught, have mutually incompatible expectations of each other. Teachers have traditionally concluded that the children are incorrigible, and the children conclude that the teachers are inconsistent and capricious. Problems seem to stem from a cultural mismatch between the teacher and the child.

Parents are at the center of a social control network. The significant feature of the control system is that it seems to operate external to the child. Therefore, the child seems to develop external locus of control, as opposed to an expected internal locus of control. One of the reasons White teachers have difficulty motivating and in disciplining African American children is the cultural dissonance that occurs when the teachers behave differently from the way the children expect authority figures to behave.

African American children enter school with excitement and enthusiasm, only to have the school crush their freedom and creativity (Hale-Benson, 1982). Children find themselves too often among unwelcoming and uncaring adults and hostile institutions and need all the developmental freedom they can muster to build muscle necessary for encountering the very white society in which they may be living. Those who are not able to build the muscle, are labeled disruptive children are prescribed medication, and are placed in "problem" classes where cognitive expectations are low, or they are suspended from school and ignored.

Although the African American culture do think and conceptualize their experience symbolically, they are a relational cultural. Haskins and Butts, 1973, suggests that intellectual analysis disconnected from feelings leads to incomplete knowledge of the world. Results of recent brain-based research reveal that "emotion drives attention, and attention derives learning and memory" (Sylwester, 1995).

African American children are exposed to a high degree of stimulation from the creative arts. They are surrounded with stimuli from the visual arts, such as posters, paintings, and graffiti, the audio arts, such as stereos, radios, and the fashion arts, such as creative hairstyles, hats, scarves, and a general orientation toward adornment of the body that grows out of the African heritage.

Some of the basic characteristics of African American children are summarized as highly affective; expresses herself or himself through considerable body language; relies on words that depend upon context for meaning; adopts a systematic use of nuances of intonation and body language, such eye movement and positioning; high sensitivity to others' nonverbal cures; seeks to be people oriented; is sociocentric; uses internal cues for problem solving; feels highly empathetic; and likes spontaneity.

Behavior of children from each group, morning and afternoon, was observed and differentiated as to those behaviors, which were situation- or cultural-bound from those in need of intervention, were identified. Three males and two females from the morning group were identified. Three children exhibiting behavior inappropriate for chronological age, (lack of social competence, playing alone and fearful of peers), two children for continuously pushing against perceived boundaries, and non-compliance of classroom rules. From the afternoon group, one female exhibiting passivity and non-acceptance of authority, three males (lacking security in play and failure to interact during play), was identified.

Teacher confirmation supported author's observation of behaviors and students identified for intervention. Three students each from the morning and afternoon group were then randomly selected, and received ten thirty-minute group therapy sessions. Knowledge and understanding of children's culturally determined behavior was considered and respected as authors proceeded with intervention utilizing directive group play therapy.

Activity periods were provided for expenditure of excess energy and appropriate brief rest periods were given to award fatigue and irritability. Techniques that incorporate body movement into the learning process were used. We were sensitive to the children's use of gestures, eye contact and other verbal cues. Children were encouraged to take conversationally and creatively; labeling, storytelling, chanting, imitation and reciting were encouraged.

Small group learning and hands on contact was made. Variations of music played during play activities. Open-ended learning materials were used; clay, socio-drama play. Games were used that encouraged playing together. Rhythm was used in speech and authors engaged in verbal interplay needed for a cultural connection with some students.

Results: Children who received directive group therapy made significant gains compared to children receiving no intervention. Gains were made in age appropriate behavior, percentage of time in active participation in structured activities, self-concept, and overall social skills. Teacher observation and evaluation noted significant improvement in classroom behavior, and other structured environments.

The ultimate of teachers, especially teachers of those at the beginning of their experience, is to structure the classroom environment in such a way as to provide minimal conflict and maximum opportunity for the child to manage herself or himself. Authors purpose that development of an expanded knowledge and experience in cultural and demographic diversity is necessary to assure this goal is met.

Bibliography

Banks, J.A. (1994). Multiethnic Education-Theory and Practice, 3rd ed., Allyn and Bacon, 71-73.

Hale-Benson, J.E. (1982). Black Children, Their Roots, Culture, and Learning Styles, John Hopkins, pp. 43, 58, 75-77.

Garcia, E. (1994). Understand and Meeting the Challenge of Student Culture Diversity, Houghton Mifflin Co.

Grossman, H. (1995). Teaching in a Diverse Society, Allyn and Bacon.

Sylwester, R. (1995). A Celebration of Neurons: An Educator's Guide to the Human Brain, Association for Supervision and Curriculum Development, Alexandria, VA.

Dr. William F. Young
Glynn County Board of Education
Brunswick, GA

Flo W. Fordham
Cedarwood Psychoeducational Program
Statesboro, GA

SERTCC INTENSIVE FAMILY BASED SERVICES - A SUPPORTIVE ALTERNATIVE TO OUT-OF-HOME PLACEMENT

The purpose of this poster presentation is to introduce a unique approach to meet needs of children and familes in the rural Southeast Georgia area. This successful program has enabled families to have intensive in-home services which keeps children in the community and prevents out-of-home placements. Services provided include crisis intervention, the teaching of communication skills and problem solving skills, the teaching of parenting, the teaching of stress management skills and providing information about community agencies and assisting in referrals to these agencies.

The Southeast Regional Troubled Children's Committee, INC. (SERTCC) has been in existence since l985. SERTCC is funded through the State of Georgia as a line item in the budget under the Department of Human Resources. SERTCC serves families in a twenty-four county area located in Southeast Georgia. During the past twelve years, SERTCC has served not ony the child referred but other siblings and parents/guardians of the child. SERTCC works cooperatively with the school system and community agencies to provide comprehensive services to the family. SERTCC is funded at $144,400.00 to administer intensive home based services.

SERTCC provides services for a three month period of time at a cost of $3000.00 to the services provider. Intermediate care placement for a twelve week period of time would cost approximately $7540.00 and intensive care placenent for a twelve week period of time would cost approximately $16, 395.00.

SERTCC can work in any community if there is a commitment on the part of CEO's of human service agencies, the business community and a compassion for the children in our communities.It takes dedicated people from all human agencies, business and education working together as a unit to be effective. The SERTCC board is composed of volunteers from business, social service agencies and education. SERTCC believes that the concept of interagency collaboration and networking between the agencies and the private sector can allow everyone to be focused on helping at-risk students and dysfunctional families. SERTCC provides professional staff development, interagency network, a liaison resource for other agencies and intensive family-based services for multiple service areas which can be replicated effectively by adapting the concept to match the needs of your area.

SERTCC providers can provide family counseling which can include crisis intervention, counseling to strengthen the marital unit and to help in parental roles, counseling to single parent or other guardian in order to strengthen and structure positive parenting techniques and teach behavior management where needed, counseling to help organize and structure the family unit through clarifying roles, setting limits, and more clearly defining the behavioral expectations of one another, teach communication skills and problem solving, teach parenting skills such as child growth and development, child caring techniques, infant stimulation, toilet training and accident prevention; teach stress management techniques such as coping skills, anger control and relaxation; teach organizational skills such as money management, time management and scheduling; and counseling regarding stabilization of the home. Service providers also work with the family in planning and participating in leisure activities.

The purpose of SERTCC is to develop, facilitate, improve and coordinate the delivery of services to troubled children and their families in primarily a twenty-four county area of southeast Georgia. The goals of SERTCC are:

1) to ensure appropriate case resolution and case staffing at the local and regional levels;
2) to develop effective policies and procedures to achieve the purposes of the organization;
3) to develop and/or facilitate continuum of community resources to meet the needs of troubled children and their families;
4) to advocate for services to children and their families;
5) to help increase the responsiveness of various agencies to the needs of children and their families through staff development and staff training.

Through the interagency process, which involves twenty-four rural counties, there are services available to children and their parents to assist them in meeting the needs in their homes. This has helped children stay in their homes and communities and prevented the need for residential services. Parents have learned skills which enable them to be successful in dealing with difficult situations at homes.

Denise Kaiser
Michael Abell
Mary L. Comer
Ohio Valley Educational Cooperative
LaGrange, Kentucky

PROJECT TRAILS:
TRANSITION: RESPONSIBLE ACTIONS FOR INDEPENDENT LIVING SUCCESS

Secondary students with mild disabilities, including learning disabilities, mild mental disabilities, and emotional behavioral disabilities are unprepared to make a successful transition into adulthood because of a number of problems which exist in contemporary secondary education programs for students with special needs. These problems include the failure of the traditional curriculum to meet their needs, a lack of skills for self-advocacy, low motivation to remain in school, and a lack of skills to make a successful transition to a post-secondary setting. As a result, these students are unprepared for employment and for living independently in the community.

Research shows that the drop-out rate among students with mild disabilities is a major problem. Studies that compared special education drop-out rates with normative data consistently showed that students with mild to moderate disabilities left school more often than students without disabilities (Bruininks, Thurlow, Lewis, & Larson, 1988, Owings & Stocking, 1986). According to The National Longitudinal Transition Study of Special Education Students (NLTS), a survey by the International Center for Disabled (Blackorby & Wagner, 1996) reports that people with disabilities are three times as likely to have dropped out of high school as people without disabilities and have an employment rate that is among the lowest of any group of Americans under 65 years old. Furthermore, according to the survey, people with disabilities are twice as likely to be poor as compared to people without disabilities (NLTS). Gartner and Lipsky (1989) reported that 47% of adolescents with learning disabilities drop out of school by the age of 16.

Project TRAILS, a three year federally funded model demonstration project, was designed by the Ohio Valley Educational Cooperative to develop and identify alternatives for youth with disabilities who have dropped out of school or who are at risk of dropping out of school. The project serves individuals in two rural school systems in Kentucky. Participants are using a newly developed functional curriculum for students with mild disabilities entitled "Life Management" as the primary strategy for helping students make a successful transition to post-secondary settings.

The project, which is in its final year, was designed to serve a total of 141 students at six sites in the two school systems. The Life Management Curriculum has been tested in a variety of settings (regular school, alternative school, summer school, night school, and home school) to determine its impact on student outcomes. Currently twelve teachers are participating in the program. These include two regular classroom teachers, a collaborative teacher, two resource teachers, two alternative school teachers, three special class teachers, and two home instruction teachers.

The Life Management Curriculum focuses on four domains: Vocational, life skills, social-personal, and academic. By using a combination of teaching strategies and routines, the curriculum enhances the student's motivation level. Direct instruction in new concepts and skills is immediately followed by an activity that involves students in direct application of what they have studied, the incorporation of community resources, or small-group instruction.

Implementation of the curriculum has included the following strategies: 1) a strong partnership with businesses to involve students in site visits, job shadowing, and mentoring; 2) an emphasis on self-advocacy training in the student's transition planning conference and across all settings; 3) follow-up of course/high school graduates through support groups, mini-courses, and monitoring visits at their home and workplace; and 4) provision of support services to individuals with mild disabilities who dropped out of school and wish to obtain their high school diploma or GED.

Project TRAILS has the following objectives: 1) to increase the percentage of students earning a high school diploma or GED; 2) to increase the number of alternative program options; 3) to increase the frequency of students participation in his/her transition planning conference; 4) to increase the percentage of students who successfully transition to the community by maintaining employment, enrolling in a 2-or 4- year postsecondary educational program, entering the military, or entering other training programs.

A number of strategies have been identified and included in the project design. Each participating class has implemented these strategies based upon the unique needs of the students. Students at one alternative school are involved in a job training program while other classes have visited a number of possible career sites. Self-Advocacy skills are incorporated in each classroom with the goal being to empower the students to take responsible control of the transition process. Some of the students are even serving as mentors to middle school-aged students to assist them in preparing for their transition planning conference and their move to the high school.

Project TRAILS evaluation data (Schuster, 1997 & Petrokso 1997) indicates the program objectives have been met each year. A number of program alternatives have been developed in order to meet the objectives. When school personnel determined the students' parents would not attend an evening program to learn more about transition issues, they developed and distributed a video for each family. Project personnel also initiated home school programs with individuals who dropped out of school when they were unable to attend night classes at the school sites.

Assisting students with disabilities to make a successful transition from educational settings into the work force, adult life, and their community is and should be a high national priority. The Life Management Curriculum has carefully blended career education, strategic instruction, and social skills and self-advocacy training into a unified program. Implementation of this curriculum, along with the support services available through Project TRAILS, has maximized our efforts to retain students with mild disabilities in school. These students are better equipped with the skills they will need to conduct their lives, both productively and pleasurable, in the communities in which they live.

References

Abell, Michael, and Kaiser, Denise. (1997) Learning Life Management in the Classroom. *Exceptional Children, 70* (5), 70-75.

Blackorby, J.& Wagner, M. (1996). Longitudinal Postschool Outcomes of Youth with Disabilties: Finding from the National Longitudinal Transition Study. *Exceptional Children, 62* (5), 399-413.

Bruininks, R.H., Thurlow, M. Lewis, D.R., & Larson, N.W. (1988). Post school-outcomes for students in special education and other students onto eight years after high school (p. 381). In R.H. Bruininks, D.R. Lewis, & J.L. Thurlow (Eds.), *Assessing outcomes, costs and benefits of special education programs* (pp. 9-111). Minneapolis: University of Minnesota, University Affiliated Program.

Gartner, A., & Lipsky D.K. (1989). *Equity and excellence for all students. The education of students with disabilities: Where do we stand?* Briefing paper for testimony given at hearing conducted by the National Council for the Handicapped, June 7-8, 1989, Washington, DC.

Petrosko, Joseph M. (1997) *Report of Interviews with Students Participating in Project TRAILS.* Evaluation report.

Schuster, John E. (1997) *Project TRAILS Evaluation Report.*

Libby G. Cohen
University of Southern Maine
Gorham, ME 04038

Loraine J. Spenciner
University of Maine at Farmington
Farmington, ME 04038

BIOTECHNOLOGY WORKS!

The study of immunology and genetics, popularly known as biotechnology, are exciting and challenging subjects for students and teachers to study. Biotechnology is an area that is growing in importance. Evolution, cloning, genetics, viruses, disease testing, development of new drugs, DNA, crime detection, and new technologies have emerged as a result of research in biotechnology. New developments are reported daily.

Biotechnology Works ! is a summer institute in immunology and genetics for students with disabilities and their high school teachers. The outcomes of this project are to effect long-term changes in the: 1) participation of persons with disabilities in the sciences; 2) methods, materials, and curricula used in high school science classes, particularly in chemistry and biology; 3) practices and preparation of high school science teachers. This project has been funded by the National Science Foundation for five years. This paper summarizes the activities of the first summer institute. The first year of the project consisted of:

- conducting a summer institute for students with disabilities and high school science teachers
- extending curriculum adaptations for students with disabilities in immunology and genetics
- field testing a curriculum and adaptations in immunology and genetics
- developing draft curriculum materials and information for high school science teachers

Justification for Focus on Biotechnology

The National Science Foundation has recognized that there is an underrepresentation of individuals with disabilities who take advanced science courses and who pursue careers in science. This project developed out of this nationally identified need to develop training for students with disabilities that would stimulate interest in science. The study of biotechnology was identified as an exciting and emerging area of science that would be of interest to students and teachers. A 1992 national survey of biology teachers conducted by the National Biology Teachers Association identified areas in which biology teachers wanted additional curriculum materials. Development/ genetics was ranked first and Immunology was ranked third.

The study of biotechnology is at the cutting edge of science and "will continue into the twenty-first century as a major frontier of science" (National Research Council, 1994, V-139). Biotechnology combines a focus on immunology and genetics. A few purposes of biotechnology are to improve yield, taste, nutrition, and disease resistance in plants and animals; prevent and test for a variety of conditions and diseases in humans, and conserve natural resources by developing alternatives to artificial fertilizers, pesticides, and clean-up of toxic wastes

The National Science Education Standards which were published in 1994 states in Content Standard C that students should develop an understanding of

- The cell
- The molecular basis of heredity
- Biological evolution

Target Populations

High school students and teachers from throughout Maine were recruited. In order to promote and encourage the carry over of activities to the students' schools once the institute was finished, preference was given to teacher and student teams who came from the same schools.

The rural nature of Maine required that specific recruitment activities be developed. Intensive efforts were made to reach out to **all** talented students with disabilities, especially students with severe disabilities and females with disabilities. Recruitment activities were designed to be redundant. Successive mailings of posters and brochures were made to all high school science teachers, school counselors, and special education directors. Project staff attended the state association meeting of science teachers. A staff member identified and made personal visits to schools that were located in rural and remote areas. Numerous contacts were made using E-mail and telephone. Repeated visits were made to schools to encourage both students and teachers to participate. Extensive use was made of existing networks. Notices were placed in state, regional, and local newsletters.

These extensive recruitment activities were successful. The number of applicants who could be accommodated exceeded the capacity of the institute. Preference was given to teachers and students who came from the same school.

Science Activities

The summer institute consisted of classroom time, laboratory time, informal meetings with scientists, lab tours, and informal recreational activities. Hands-on laboratories that were offered included: immunodiffusion, enzyme linked immunoadsorbent assay (ELISA), agglutination, electrophoresis, DNA extraction, DNA digestion using restriction enzymes, and horizontal gel electrophoresis. Table 1 is an example of a daily schedule.

Adaptations for Students with Disabilities

During daily work sessions, teachers developed and piloted strategies for teaching each of the laboratories to students with disabilities. A summary of these strategies can be found in Table 2.

Table 1 Summer Activities for Students and Teachers	
8:00-9:00 a.m.	Seminar, overview of morning activities
9:00-noon	Group work, collaborative activities, direct instruction, including: basic concepts of immunology and infectious diseases, immunoassays, immunologic diseases, allergies, AIDS, diabetes, and mathematical principles used in the laboratory exercises
12:00 p.m.-1:00 p.m.	Lunch/free time - Students
12:00 p.m.-1:00 p.m.	Lunch/seminar - Teachers
Afternoon 1:00 p.m. - 4:00 p.m.	Laboratories: lab safety, equipment, data collection, analysis, laboratory exercises, guest speakers, field trips to biotechnology companies
4:00-5:30 p.m.	Free time Computer activities Recreational activities
Evening	Group activities: informal talks with scientists, lab tours, swimming, trip to state park, cook-outs.

Teacher Curriculum Guide

As part of their work during the science institute, teachers developed a draft guidebook containing strategies for teaching science to students with disabilities. During the next funding cycle, the guidebook will be revised and piloted. All project materials will be disseminated through: Internet, University of Southern Maine World Wide Web site, regional and national science, mathematics, and special education conferences, federally funded regional laboratories, journal articles, and ERIC Clearinghouses.

References

National Research Council (1994). National science standards. Washington, D.C.: National Academy Press.

Table 2 Examples of Strategies that Teachers Developed	
Disability	Strategy
physical disability/mobility impairment	*assistive devices (voice input, specialized keyboard, switch, Morse code) *making science probes accessible *note taker *labs and lab equipment physically accessible
learning disability	*note taker *taped lectures and books *extended time for tests *computer with voice input and voice output *provide outline of activity *present technical content in small steps
visual impairment	*computer with voice input and output *use computer options for enlarging print size *optical character reader *Braille display *talking thermometers and calculators *class materials available in electronic form *use verbal descriptions *record test questions and have student respond using tape recorder *tactile models *overhead projector *magnifying glass *balance with digital display
deaf, hard of hearing, hearing impairment	*note taker *interpreter, FM system *written assignments *visual warning system for lab safety *videos with closed captioning

Helen Hammond, Ph.D.
University of Texas @ El Paso
El Paso, Texas

A PERSONNEL PREPARATION PROJECT: IT TAKES MORE THAN MONEY!

This project, entitled "Preparing Special Education Personnel for Professional Positions In Our Schools" is in its fifth and final year of operation. The focus of this project has been on meeting the severe shortage of special education teachers in the State of Texas and particularly in the El Paso region. This project is based on a two-tier level of training. Level one participants include undergraduate students and level two involves graduate students each of whom are completing degrees in special education.

Over the past years, financial assistance and professional support have been provided each semester to special education paraprofessionals or full-time special education substitute teachers (level one) and graduate students (level two). Called "teachers in training," the undergraduate participants have been selected from El Paso region, based upon their experience and commitment to working in the field of special education. The graduate students referred to as "mentor teachers," were each selected based on their academic credentials and their years of experience as exemplary special education teachers. Each of the mentors have provided various professional supports and supervision to the undergraduate participants of this project. Additionally, the mentor teachers were able to extend their own professional expertise and experiences by providing seminars and instruction in undergraduate special education classes.

During the project's four years of operation, twenty students (a combination of undergraduate and graduate levels) have graduated with their perspective degrees. We anticipate by the termination of this project, an additional eleven students will successfully complete their degrees. The remainder of the participants (sixteen undergraduate and two graduate students) will have approximately three semesters or one year of coursework left to finish. Additionally, one graduate and three undergraduate students were employed by this grant as research assistants. Each of these individuals were in the special education field of training and three of the four students have graduated. In summary of our graduate data, twenty-four undergraduate and ten graduate students will have completed their intended special education degrees by the final semester of this project.

This data is very exciting as it certainly provides evidence this project has contributed to the field of special education. Not only has the project assisted in filling the shortage of special education teachers in our schools, but also has assisted in preparing very qualified and experienced personnel for special education positions. Each of our project undergraduate participants were individuals who had numerous years of experience in special education classrooms (either as paraprofessionals or full-time substitute teachers). Based on their years of experience and their determination to further their knowledge and education, it is obvious these individuals are very committed to the field of special education. Additionally, the likelihood is great that these teachers will remain in the field of special education as they are well-acquainted and experienced with the field due to their numerous years of service as paraprofesionals, substitute teachers, or certified teachers.

Project staff believe that specific elements of this project were instrumental in its success. Obviously, an important component of the project was the financial assistance for tuition and book expenses. Although this component was essential, project staff realized a successful personnel preparation project takes more than money! Participants frequently commented that the mentoring, monitoring, and close advising were vital aspects of the project. On numerous occasions students felt overwhelmed in their personal and professional schedules. We frequently heard students state "they wanted to take a break for a year from taking courses" or "they wanted to reduce their number of required courses for the academic school year." At these points, participants were reminded of the compliance regulations of our project. Each participant realized they were being closely monitored and if they became out of compliance with their grade point averages or coursework completion, they risked being terminated from the project. The monitoring component served as a strong force for all participants to persevere with their coursework at the quality level they agreed upon at the entrance into our project.

Other issues surrounding advising and mentoring were critical aspects of the project. Students realized they had not only project staff to assist at times of professional or personal need but also had an assigned mentor (graduate student) who supported their endeavors.

An additional supportive element of the project was one that developed quite naturally through the course of the project. A cohort of students at both the graduate and undergraduate levels developed. Consequently a natural support system evolved through their involvement in common classes, goals, and professional experiences in the schools.

Our project provided additional types of training through the monthly meetings, seminars, and workshops. These activities gave the mentors opportunities in implementing training workshops on selected topics and the undergraduate students additional training beyond their coursework.

All of the components of this project were valuable in their contributions to the success of the project. Although the financial assistance was necessary, project staff operated firmly on the belief that participants needed additional assistance beyond the financial level. In order to maintain the participants in the project, professional and personal support were vital. It was obvious to the project staff that the individuals selected to participate on this project were very dedicated and devoted to the intended outcomes of the grant.

The project maintains that the best resource for additional special education professionals are those who are already in the schools, either as support staff or certified special education teachers within the schools. These personnel, given additional opportunities and training, should not only continue to provide excellent education for students with disabilities but also become leaders in their schools and community.

Dianne Monteith
South Carolina State University
Orangeburg, SC

SPECIAL EDUCATION ADMINISTRATION TRAINING FOR RURAL MINORITYS SCHOOL LEADERS: A FUNDED PROPASAL

Introduction

In April, 1991 at the announcement of the national education strategy, AMERICA 2000, President Bush stated: "We are responsible for educating everyone among us, regardless of background or disability." This statement makes it clear that this reform package applies to all Americans and that states will be held accountable for adequately addressing the National Education Goals.

Implementing the Least Restrictive Environment (LRE) and/or the full inclusion philosophy (i.e., disabled students participate in regular classrooms) creates new needs and places new demands on public school personnel.

One significant issue in the call for reforms has been on the quality of training programs for principals and the teachers whom they supervise. Widespread agreement exists about the crucial role of principals (elementary, middle, and secondary) in producing effective schools. Focusing solely on principals and ignoring other critical factors such as teachers, textbooks, curriculum, school funding, and the leadership of superintendents, other members of the administrative team, and the school boards would be a mistake. However, it is the principal who sets the tone for the school and overseas the organization and implementation of an effective instructional program (Greenfield, 1987; Smith, 1989; Sergiovanni,1990 ; & Olivia, 1993).

In 1985, the U.S. Department of Education's Office of Special Education (OSEP) funded a series of grants for the purpose of investigating instruction plus organizational and administrative issues related to educating students with disabilities in the regular classroom environment. This unified system of delivery has come to be known as the Regular Education Initiative (REI). In order to accomplish a partnership between regular and special education, Madeline Will, in a U. S. Department of Education report titled, "Educating Students with Learning Problems: A shared Responsibility" (1986), made the following recommendation: "principals should be empowered to control all programs and resources at the building level." With Will's endorsement of this initiative, many experts in the field have become advocates of educating children and youth with disabilities in a single system (Wang, Reynolds, & Walbert, 1988; Lipsky & Gartner, 1988; Lilly, 1988; Kauffman & Hallahan, 1991; Loyld, Sing, & Repp, 1991). As this movement becomes adopted by school districts, principals must command an understanding of special education to implement procedural requirements effectively and to provide appropriate educational services for disabled students in their schools.

Even if the Regular Education Initiative does not fully become a reality, the "least restrictive environment" (LRE) concept will continue to be a major component of the Individuals with Disabilities Education Act (IDEA) (1990). LRE means that students with disabilities should be moved to self-contained special education classes only when the severity of their disabling condition is so great that the student" needs cannot be accommodated in the regular educational setting (Salend, 1990; Turnbull, 1991). Hence, principals need to be knowledgeable regardless of what reforms they are addressing.

Most principals, however, do not have the knowledge of the instructional and programmatic needs of disabled children. At the 70th annual convention of the Council for exceptional Children (Baltimore, 1991), Aspedon (1992) presented the results of a study titled "Principals' Attitudes Towards Special education: Results and Implications of a Comprehensive Research Study. " Some significant findings were: (1) over 40% of principals had never had any special education course; (2) over 85% of principals felt that formal training in special education is needed in order to be a successful building principal; (3) over 80% of principals had moderate to very high interest in receiving special education training; and (4) despite lack of special education training, over 75% of principals had exclusive or shared responsibility for supervising and evaluating special education teachers in their schools. This study found striking similarities between its findings and the work of Davis (1989). This comparison indicated that little had been done in the ensuing years to assist building principals in assuming ownership for special education programs and students with disabilities. In addition, research has established that principals generally have negative attitudes about assuming additional responsibilities related to the educational needs of disabled children because they have not had the training necessary to develop effective programs (Olson, 1982; O'Neil, 1988; Hirth & Valesky, 1989; Weinstein, 1989). These studies with regular education teachers, special education teachers, and administrators indicated that the groups expressed the need for training in order to implement changes in classroom services legally mandated.

Valesky and Hirth (1992) surveyed state directors of special education to examine state requirements for certification endorsements of school administrators to determine whether they require a knowledge of special education law, specifically, and special education in general. This study found that only 33% of all regular administrator endorsements were required to have a knowledge of special education law and that no state requirement for a general knowledge of special education existed for 45% of the regular administrator endorsements.

In an earlier study, Hirth and Valesky (1991) surveyed colleges and universities in the United States offering graduate degrees in school administration to determine requirements for special education and special education law knowledge for administrative endorsements. This study found that only 27% of all regular administrator endorsements offered required knowledge of special education law and 57% of endorsements offered by the universities had no requirement for knowledge of special education.

A recent North Carolina Comprehensive System of Personnel Development (CSPD) report (NCDI, 1991-1995), which presents current data available fro0m many sources (e.g., teacher certification, descriptions of trends in various disability areas) lists "limited administrator knowledge and support" as a barrier to effective service delivery. In addition, regard to inservice training opportunities, the report specifically states that administrators should be instructed inn the following areas related to students with disabilities: (a) personnel development and support; (b) behavior management; (c) development of reasonable expectations for disabled students and programs; (d) legal issues relating to identification and placement; (e) legal issues relating to expulsion and out-of-school and in-school suspension; (f) systems for offering support for disabled children service providers; (g) placement decision-making skills; (h) competencies in the mainstreaming process and implementation; and (I) advocacy for disabled students' families. While these training areas were specifically listed under the behaviorally-emotionally disabled program, administrators should have these training opportunities for all areas of disabilities.

The South Carolina State University Department of Educational Administration (1993) conducted a survey at the building level to determine to what extent practitioners felt they already possessed knowledge necessary to effectively administer programs for students with disabilities and if they would be interested in training and/or a degree concentration in disabilities related supervision (e.g., behavior management, personnel evaluation). The sample was drawn from principals, assistant principals, and supervisors from South Carolina, southern North Carolina, and northern Georgia enrolled in the Ed. S and Ed. D. programs and graduate students at South Carolina State University. One hundred and twenty individuals responded to the survey.

Significant findings indicated: (a) 75% of the administrators had no formal training in special education; (b) that what they did know about special education came from memos sent to them from the administration office or state or through "making mistakes;" (c) over 90% of the administrators indicated that formal special education training was needed in order to be an effective school leader; and (d) 89% indicated that they would be interested in participating in a training program. The Survey questions and results is presented in Appendix A. A survey conducted at North Carolina Central University involving principals enrolled in classes at that institution as well as administrators in Durham County, Granville County, and Wake County indicated similar results. In another study (Langley, 1993) involving 103 secondary principals in South Carolina, 97% indicated that course work in administration of special education programs would be useful to extremely useful, and 95% felt that coursework in administration/ supervision of learning disabled programs would also be very beneficial in terms of performing their job duties. These studies clearly support the need to train school administrators in special education.

It is clear that principals need and want training in special education if the current trend of educating the majority of children with disabilities by implementing the full inclusion policy or LRE mandate continues. Thus administrator preparation institutions should design and implement administrator training programs that address the need for knowledge of special education.

As indicated earlier, principals and other administrators felt the need for additional special education training in both theory and practice. In view of this, the Department of Educational Administration developed a course of study (special education component/competencies) which focused on bridging the gap between theory and practical application. Therefore, each course had a field experience component, giving students the opportunity to immediately be involved with disabled students. Also, the sequence of courses culminated in an internship where participants have a more intensive experience.

Competencies in this special education component may arbitrarily be assigned to four areas: core, assessment, special problems/topics. And internship/practicum. These competencies identify specific knowledge and skills which would enable principals to more effectively perform job tasks related to special education. Following are examples of these competencies.

Core Competencies

1. Identifying disabled students
2. Being familiar with definitions of various disabling conditions
3. Being aware of current legislation related to individuals with disabilities
4. Understanding the historical influence of various legislation
5. Understanding the etiology incidence and prevalence figures of various disabling conditions
6. Understanding the educational needs of students with disabilities
7. Understanding the concept of least restrictive environment
8. Identifying effective classroom methods appropriate for varying handicapping conditions
9. Adapting and modifying curriculum materials
10. Using technology effectively
11. Understanding how to use assessment data to plan instructional programs

Assessment

12. Understanding basic considerations in psychological and educational assessment of students (including legal and ethical considerations
13. Applying assessment information to educational decision making (understanding how to write and evaluate IEPs)
14. Understanding the general referral and assessment process as well as how it relates to specific states
15. Acquiring Level I and Level II computer competency

Special Problems/Topics

16. Understanding current topics/problems in administration as they relate to special education (e.g., LRE—achieving full inclusion, mainstreaming, disciplining students with disabilities, advocacy, and legal issues)
17. Developing specific administrative knowledge/competencies essential to school administration with emphasis in special education.
18. Synthesizing theoretical knowledge and applied skills gained in the classroom setting.
19. Acquiring practical experience which leads to increasing competency with emphasis in special education.
20. Gaining experience in formative and summative staff evaluation in a special education setting.
21. Developing an analytical paper or doing a project related to some problem identified in relation to special education at the building or district level.

Special Education Courses

The following five courses address these administrative competencies necessary for principals to effectively supervise special education programs and personnel.

1. Introduction to Exceptional Children and Youth: This course would cover a general overview of exceptional children and youth. Major emphasis should

focus on critical issues such as current legislation , historical influence, definitions, incidence, prevalence figures, identification, etiology, educational adaptations and cultural diversity. Additionally, the course should provide participants an increased awareness, knowledge, and understanding of the educational needs of children and youth and the least restrictive environment. Students should spend a 10 hour field experience observing students with disabilities.

2. Educating Exceptional Children and Youth: This course would be an extension of the introductory course. Students would be exposed to specific methods and materials that could be used effectively in the classroom setting with the varying handicapping conditions. Emphasis would be on adapting and modifying curriculum materials, effectively using technology, and using assessment data to plan instructional programs. This course would include a 10-hour field experience of individual and small group instruction with students with disabilities.

3. Assessment in Special Education: This course describes basis considerations in psychological and educational assessment of students to include legal and ethical considerations is assessment. Basic measurements concepts and the most common domains in which assessment of abilities and in which assessment of skill attainment are conducted also discussed. Special consideration is given to applying assessment information to educational decision making. This course also addresses general referral and assessment processes as well as those that are state specific. The student also acquires Level I and Level II computer competencies. This field experience students- high school, middle school, and elementary school.

4. Special Topics in Educational Administration: A special topics seminar focuses on various topics/problems in administration as they relate to special education. Examples of topics include REI and/or Achieving Full Inclusion, Mainstreaming, Disciplining Students with Disabilities, Advocacy, and Legal Issues.

5. Internship in Educational Administration: This course provides a supervised internship in educational administration with an emphasis in special education. This experience should be as realistic as possible. It should ensure that principles enter the professional job market with the skills needed for survival and success in a culturally diverse setting. This internship also incorporates a variety of structured requirements and activities that collectively "bridge the gap" between methods and/or laboratory courses and actual independent professional administration.

These five courses were incorporated into a grant funded by the U. S. Department of Education for five years. Practicing certified administrators throughout North Carolina, South Carolina and Georgia and Ed. S./Ed. D. students in the Department of Educational Administration at South Carolina State University are eligible to receive the grant. The grant funds a 15 student cohort for each of the 5 years.

Although more in-depth knowledge and training may provide optimal preparation to administer special education programs, the foregoing 15 credit hour concentration seems more realistic in terms of program requirements and students' needs/interests. Of greatest importance is that principals and other administrators have adequate knowledge and skills to administer all programs for which they are accountable.

References

Aspedon, M. (1992, April) .*Principals' attitudes toward special education: Results and implications of a comprehensive study*. A paper presented at the 70th Annual Convention of the Council for Exceptional Children, Baltimore, MD.

Brooks, J. (1992). *Attitudes of school administrators toward national board teacher certification.* Unpublished doctoral dissertation. South Carolina State University, Orangeburg.

Davis, W.E. (1989). The regular education initiative debate: Its promises and problems. *Exceptional Children,55,* 440-446.

Greenfield, W. (1987). *Instructional leadership:* Allyn & Bacon.

Hirth, M., & Valesky, T. (1989). Principals' knowledge of special education law. *National Forum of Educational Administration and Supervision Journal, 6,* (3), 130-141.

Hirth, M., & Volecky, T. (1991). Survey of universities: Special education knowledge requirements in school administration programs. *Planning and Changing, 2,* (3), 165-167.

IDEA (Individuals with Disabilities Education Act-PL101-476). (1990). Formerly PL.94-142. Federal Register, Section 121 A.S.

Jones, E.H., & Montenegro, X.P. (1988). *Women and minorities in school administration.* Arlington: American Association of School Administrators.

Kauffman, J.M., & Hallahan. (1991). Toward a comprehensive service delivery system. In J.I. Goodlad & T. C. Lovitt (Eds.). *Integrating general and special education*. Columbus, OH: Merrill/Macmillan.

Langley, A (1993). *A comparative study of university preparation programs in relation to job responsibilities of secondary principals in South Carolina public high schools.* Unpublished doctoral dissertation, South Carolina State University, Orangeburg.

Lilly, M.S. (1988). *The regular education initiative: Alternative perspectives on concepts, issues, and models*. Sycamore, IL: Sycamore Press.

Lipsky, D.K. & Gartner, A. (1987). Capable achievement and worthy of respect: Education for handicapped students as if they were full-fledged human beings. *Exceptional Children, 54*, 69-74.

Lloyd, J.W., Singh, N.N., & Repp, A.C. (Eds.) *The regular education initiative: Alternative perspectives on concepts, issues, and models*. Sycamore, IL: Sycamore Press.

McDowell, L, & Morgan, F.B. (1990). Public elementary and secondary schools and agencies in the United States and outlying areas: School year 1988-89. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

O'Neil, J. (1988, September). The regular education initiative: Seeking integration between special regular education. ASCD Curriculum Update, 4-5.

Olivia, P. (1993). Supervision for today's schools. White Plains, NY: Longman.

Olson,J. (1982). Public secondary principal's knowledge of an attitude toward PL 94-142 and their relationship to the provision of special education services at the building level. Dissertation Abstracts International, 43, 377.

Reiff, H.B., Evans, E. D., & Cass, M. (1991, September/October). Special education requirements for general education certification: A national survey of current practices. Exceptional Children,12, (5), 56-60.

Salend, S. (1990). Effective mainstreaming. New York: Macmillan Publishing.

Sergiovani, T. J. (1990). Value-added leadership: How to get extraordinary performance in schools. San Diego: Harcourt, Brace, Janovich.

Smith, W.J., & Andrews, R.L. (1989) Instructional leadership: How principals make a difference. Arlington, VA: Association for Supervision and Curriculum Development.

Special Report. (1992, May 7) Top degree producers. Black Issues in Higher Education, 12, (5), 16-46.

Turnbill, H.R. (1991). Free appropriate public education: The law and children with disabilities. (2nd ed.). Denver: Love.

Valesky, T., & Hirth, M. (1992). Survey of the states: Special education knowledge requirements for school administrators. Exceptional Children,58, (5), 399-406.

Villegas, A. (1991). Culturally responsive pedagogy for the 1990s and beyond. A report for Educational Testing Service and the ERIC Clearinghouse on Teacher Education.

Wang, M.C., Reynolds, M.C., & Walberg, H.J. (1988). Integrating the children of the second system. Phi Delta Kappan, 70, 248-251.

Will, M. (1986). Educating children with learning problems: A shared responsibility. Exceptional Children, 52, 411-415

Weinstein, D.F. (1989). The administrator and special education programs: Quality control of placement instruction. ERS Spectrum, 1, (3), 35-40.

TOPIC INDEX BY STRAND

Each of the 1998 Conference papers was presented within one topical strand related to the primary focus as presented. Many papers relate to multiple strands, but most are indexed here according to the main strand.

AT RISK STUDENTS

Standard Achievement Tests and Students with Special Needs
Dawn Burke, Wiley Ford Primary School, Wiley Ford, West Virginia; and Thomas P. Lombardi, West Virginia University, Morgantown, West Virginia 338

COLLABORATIVE EDUCATION MODELS

Biotechnology Works!
Libby G. Cohen, University of Southern Maine, Gorham, Maine; and Loraine J. Spenciner, University of Maine-Farmington, Farmington, Maine 383

It Takes Two: Co-Teaching for Deaf and Hard of Hearing Students in Rural Schools
Mary V. Compton, Angie Stratton, Ali Maier, Charice Meyers, Holly Scott, and Tammy Tomlinson, University of North Carolina-Greensboro, Greensboro, North Carolina 204

Cooperative Teaching and Cooperative Learning: The Key to Successful Collaboration in Rural Classrooms
Nancy Harriman, University of Southern Maine, Gorham, Maine; Mary Schmidt, East Caroline University, Greenville, North Carolina; and Sherry Estabrook, University of Southern Maine, Gorham, Maine 274

Clarion University of PA and SMILES AmeriCorps: Collaborations with Basic Education
Bryan W. Huwar, Clarion University of Pennsylvania, Clarion, Pennsylvania 288

A Collaborative Program to Prepare Mainstream Teachers with Peer Supervision by General and Special Educators
Barbara L. Ludlow, Wilfred D. Wienke, Joan Henderson, and Holly Klein, West Virginia University, Morgantown, West Virginia 26

Special Education Administration Training for Rural Minority School Leaders: A Funded Proposal
Dianne Monteith, South Carolina State University, Orangeburg, South Carolina 400

Including Rural Districts in Inclusion Staff Development
Loretta Pfluger and Jenny Hendricks, Region 16 Education Service Center, Amarillo, Texas 248

Practicing What We Preach: Collaborating Across and Through College Methods Courses
Laura Reissner, Northern Michigan University, Marquette, Michigan 169

Including Students with Severe Disabilities in Rural Middle and High School: Perceptions of Classroom Teachers
Joan P. Sebastian and Connie Mathot-Buckner, University of Utah, Salt Lake City, Utah 308

DEAF EDUCATION AND SERVING STUDENTS WITH HEARING LOSS

It Takes Two: Co-Teaching for Deaf and Hard of Hearing Students in Rural Schools
Mary V. Compton, Angie Stratton, Ali Maier, Charice Meyers, Holly Scott, and Tammy Tomlinson, University of North Carolina-Greensboro, Greensboro, North Carolina 204

Long Distance Education at the University of Kansas (Rural Deaf Education in the Midwest)
Barbara Luetke-Stahlman, University of Kansas, Kansas, Kansas 226

Language Development Through Story Retelling Documented By Six Trait Writing Analysis
Nancy Montgomery, University of Kansas, Kansas City, Kansas; and Cindy Griffiths, Olathe District Schools, Olathe, Kansas 132

EARLY CHILDHOOD

Rural Ojibwe Mothers' Experiences with Early Childhood Special Education Services
Belle P. Aakhus, and John H. Hoover, University of North Dakota, Grand Forks, North Dakota 218

Identification, Differeniation and Intervention of the Demographically Diverse Four Year Old: Strategies for Rural Education
Pauline J. Holloway, Oklahoma State University, Stillwater, Oklahoma; and Charlotte Myles-Nixon and Wanda M. Johnson, University of Central Oklahoma, Edmond, Oklahoma 373

Families and Early Intervention Professionals in Rural Areas: Unique Challenges
Melanie B. Jephson, Kendra P. Russell, L. A. Youngblood, Stephen F. Austin State University, Nacogdoches, Texas 343

Prenatal Drug Exposure in the Heartland: Rural Daycare to the Defense
Lloyd Kinnison, Texas Women's University, Denton, Texas; and Dennis L. Cates, Cameron University, Lawton, Oklahoma 91

Unlocking Children's Language Development
J. Lindsey Stafford, Lawton Public Schools, Lawton, Oklahoma 21

LEADERSHIP AND POLICY ISSUES

Administrative Concerns Toward Innovations (Inclusion)
H. H. (Buddy) Hooper, Jr., Turner Unified School District, Kansas City, Kansas; and Donald (Don) Fry, University of Houston-Victoria, Victoria, Texas 304

Staying, Leaving, and Job Satisfaction in a Rural/Remote State: A Matter of Roots
John H. Hoover and Belle P. Aakhus, University of North Dakota, Grand Forks, North Dakota 84

A Discussion of the Roles of Institutions of Higher Education in Meeting the Needs of School in Rural Areas
David J. Lasseter and Diane Lea Ryndak, University of Florida, Gainesville, Florida 322

Who's in Charge Here? Leadership in Rural Special Education
Robert L. Morgan, Indiana Wesleyan University, Marion, Indiana; James E. Whorton, University of southern Mississippi, Hattiesburg, Mississippi; and Patricia A. Cruzeiro, Chadron State College, Chadron, Nebraska 316

Coming Together Through Comprehensive Professional Development -- Key To Statewide Improvement Plans
Harvey Rude, University of Northern Colorado, Greeley, Colorado; Karl Murray and Judy Stockhouse, National Association of State Directors of Special Education (NASDSE), Alexandria, Virginia 46

Anticipating Future Teacher Shortages: A Review of One Alternative Approach for Rural Districts
Michael E. Sullivan, Marshall University Graduate College, South Charleston, West Virginia 110

The New IDEA: What is the Impact on Federal Funding of Rural Personnel {reparation
Wilfred D. Wienke and Suzanne M. Martin, West Virginia University, Morgantown, West Virginia; Jane M. Williams, Arizona State University West; and Robert Gilmore, Office of Special Education Programs, Washington, DC 156

MULTICULTURAL CONCERNS

Serve To Learn: Making Connections in Rural Communities
Mary T. Davis, Maggie J. Emery, and Cheryl Lane, Clemson University, Clemson, South Carolina 77

Let's Talk About the Needs of African American Children with Sickle Cell Disease: A Recognized "Other Health Impairment"
Elizabeth A. Dooley and Nechelle Perkins, West Virginia University, Morgantown, West Virginia 258

Project BESTT: A Training Model for Rural, Multicultural Bilingual Special Education
Laurence Armand French and Richard Francis Rodriguez, Western New Mexico University, Silver City, New Mexico 62

Identification, Differeniation and Intervention of the Demographically Diverse Four Year Old: Strategies for Rural Education
Pauline J. Holloway, Oklahoma State University, Stillwater, Oklahoma; and Charlotte Myles-Nixon and Wanda M. Johnson, University of Central Oklahoma, Edmond, Oklahoma 373

Parent Support Services on the Navajo Reservation
Doris Jones, Susan Miller, Catherine Medina, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 234

Teaching Navajo Bilingual Special Education Students: Challenges and Strategies
Jamie B. Lewis, Kathleen Bennett deMarrais, Greg Prater, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 148

Traditional Versus Contemporary Navajo Views of Special Education
Catherine Medina, Doris Jones, Susan Miller, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 179

The Rural Special Education Project: A Six-Year Evaluation
Susan Miller, Catherine Medina, Doris Jones, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 42

Pinon Preparation Program (PPP): Meeting the Needs of Rural Native American Students Through Site-based Education Programs
Greg Prater, Jamie E. Lewis, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 15

OTHER ISSUES IN SPECIAL EDUCATION

A Bee Sees Its New Home
John D. Foshay, West Virginia University, Morgantown, West Virginia 356

PANEL: Perspectives on Adapted Physical Education Services to Rural Populations
Joe Nolan, Texas A & M-Corpus Christi, Corpus Christi, Texas; Peter Ellery, University of South Florida, Tampa, Florida; and Paul Maguire, University of Alaska-Anchorage, Anchorage, Alaska 125

Educating Students with PDD/Autism: The Case for Rational Inclusion
Frank C. Renew, RENEW ASSOCIATES, Penacook, New Hampshire 118

PARENTS AND FAMILIES

Rural Ojibwe Mothers' Experiences with Early Childhood Special Education Services
Belle P. Aakhus, and John H. Hoover, University of North Dakota, Grand Forks, North Dakota 218

Parents as Partners in Education
Lanny Hubbard, Tracy Weiskircher, and Lea Wooldridge, Lincoln County Board of Education, Stanford, Kentucky 194

Parent Support Services on the Navajo Reservation
Doris Jones, Susan Miller, Catherine Medina, and the NAU Research Team, Northern Arizona University, Flagstaff, Arizona 234

SERTCC Intensive Family Based Services - A Supportive Alternative to Out-Of Home Placement
William L. Young, Glynn County Board of Education, Brunswick, Georgia; and Flo W. Fordham, Cedarwood Psycho-educational Program, Statesboro, Georgia 378

PROFESSIONAL DEVELOPMENT - PRESERVICE AND INSERVICE

Labeling and Classification
Shu-Jen Chen, Oklahoma State University, Stillwater, Oklahoma 358

Training Rural Teachers as Researchers: Guidelines for Conducting Field-Based Research in the Rural Classroom
Belva C. Collins, Jennifer Grisham-Brown, and John W. Schuster, University of Kentucky, Lexington, Kentucky 267

Keeping Qualified Special Educators Under the Big Sky
Mary Susan E. Fishbaugh and Linda Christensen, Montana State University-Billings, Billings, Montana 241

A Personnel Preparation Project: It Takes More Than Money!
Helen Hammond, University of Texas at El Paso, El Paso, Texas 387

Project LISTOS: A Bilingual Special Education Program
Lawrence Ingalls, University of Texas at El Paso, El Paso, Texas 368

Teacher Training: Providing Instruction in a Basic Teaching Strategy in Elementary Rural General Education Settings
Fay Balch Jackson, Wayne State College, Wayne, Nebraska; and Marion Madison, University of West Alabama, Livingston, Alabama 161

Preparing Teachers to Work with Children and Youth with Emotional/Behavioral Disorders (E/BD) in Rural Settings Through the Use of Technology
Suzanne M. Martin and Wilfred Wienke, West Virginia University, Morgantown, West Virginia 254

Promoting Greater Reflectivity in Rural In Service Practicum Experiences
Steve Pavlovic, Billie Friedland, and Sara Brannan, West Virginia University, Morgantown, West Virginia 98

Teacher Education Partnerships at Valley High School
Harvey Rude and Barbara Dickinson, University of Northern Colorado, Greeley, Colorado; and Jerry Weiser, Valley High School, Gilcrest, Colorado 54

Voices From Within
Keith Salyer, E. Joanne Necco, Joann McCarthy, University of Central Oklahoma, Edmond, Oklahoma; and Sherry D. Ward, Piedmont Middle School, Piedmont, Oklahoma 330

Preparing General Educators to Serve Students with Learning Disabilities: Rural Classroom Applications
Wilfred D. Wienke, West Virginia University, Morgantown, West Virginia; and Kevin Miller, St. Bonaventure University, St. Bonaventure, New York 199

Revisiting ADHD Inservice Training for Rural Educators
Diane T. Woodrum, West Virginia University, Morgantown, West Virginia 280

PROFESSIONAL PUBLICATION FOR ACRES

PANEL: *The Pen is Mightier Than the Sword: How to Get Published in the Rural Special Education Quarterly*
Jack T. Cole, R. Fletcher, Robert Gerke, and Catherine Medina, New Mexico State University, Las Cruces, New Mexico (reprinted from 1995 ACRES Conference Proceedings) 106

TECHNOLOGY

PANEL: *The Good and the Bad in Disatnce Education*
Gary Adamson, University of New Mexico, Albuquerque, New Mexico 103

Developing Interaction in Computer Mediated Learning
Kay Sather Bull, Sarah Leigh Kimball, and Susan Stansberry, Oklahoma State University, Stillwater, Oklahoma 210

Instructional Design in Computer Mediated Learning
Kay Sather Bull, Sarah Leigh Kimball, and Susan Stansberry, Oklahoma State University, Stillwater, Oklahoma 34

Techniques for Developing a Syllabus/Website for a Computer Mediated Learning (CML) Course
Kay Sather Bull, Sarah Leigh Kimball, and Susan Stansberry, Oklahoma State University, Stillwater, Oklahoma 69

Long Distance Learning: A Collaborative Approach for a Speech Pathology Program
Margaret Cotter, Cooke County Special Education Coop, Gainesville, Texas 292

A Collaborative Computerized Language Training Project Between Gonzaga University and St. Luke's Rehabilitation Institute
Suzanne Harrison, Gonzaga University, Spokane, Washington 297

Long Distance Education at the University of Kansas (Rural Deaf Education in the Midwest)
Barbara Luetke-Stahlman, University of Kansas, Kansas, Kansas 226

Teams, Networks, and Assistive Technology: Training Special Educators in Rural Areas
Cheryl Henderson and Maggie Kyger, James Madison University, Harrisonburg, Virginia; and Dana Guarino-Murphey, Lynchburg College, Lynchburg, Virginia 173

A Horse of a Different Color: Distance Education: Making It Effective
Jo Jakupcak, University of Montana, Missoula, Montana; and Mary Susan Fishbaugh, Montana State University-Billings, Billings, Montana 139

***PANEL:** Developing Interactive Multimedia Modules to Train Rural Special Education Personnel*
Barbara L. Ludlow, John D. Foshay, and Michael C. Duff, West Virginia University, Morgantown, West Virginia 1

Preparing Teachers to Work with Children and Youth with Emotional/Behavioral Disorders (E/BD) in Rural Settings Through the Use of Technology
Suzanne M. Martin and Wilfred D. Wienke, West Virginia University, Morgantown, West Virginia 254

Beyond Bells and Whistles: Using Interactive Multimedia for Preservice and Inservice Education
Linda P. Thurston, , Betsy Cauble, and Janice Dinkel, Kansas State University, Manhattan, Kansas 9

The Whole World: Just Down the Road
James E. Whorton, University of Southern Mississippi, Hattiesburg, Mississippi; Robert E. Fowler, University of Charleston, Charleston, South Carolina; and James A. Siders, University of Southern Mississippi, Hattiesburg, Mississippi 348

TRANSITION

The Entrepreneurial Curriculum: Rural School-Community Process for Vocational Training of Adolescents with Disabilities
Veronica Gold and Ellen Williams, Bowling Green University, Bowling Green, Ohio 186

Project TRAILS: Transition Responsible Actions for Independent Liveing Success
Denise Kaiser, Michael Abell, and Mary L. Comer, Ohio Valley Educational Cooperative, LaGrange, Kentucky 380

The Transition Planning (ITP) Process for Secondary Students with Severe Disabilities- A Pilot Focus Group Project Comparing Urban and Rural Populations
Joe Nolan, Texas A & M-Corpus Christi, Corpus Christi, Texas 370